TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

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Volume 18—Number 5

CHECK AND PASS ALONG

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Use Inquiry Slips—Pages 8 and 104

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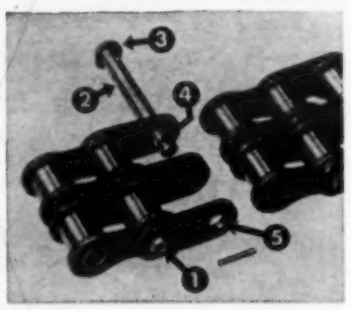
EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

RIVETED ROLLER CHAIN
easily assembled and disassembled



Long wearing characteristics and ease of assembly and disassembly are combined in improved Baldwin assembly riveted roller chain. It is supplied in ASA standard and heavy series, in 1 through 2½-in. pitch sizes in multiple widths, and is offered in 10-ft lengths with Baldwin-Rex single pin coupler. Spacing of couplers varies with chain size, but they are placed in the assembled chain so that any length can be made up without cutting rivets or damaging parts. Made by **Chain Belt Co.,** Baldwin-Duckworth Div., 4686 W. Greenfield Ave., Milwaukee 1, Wis.

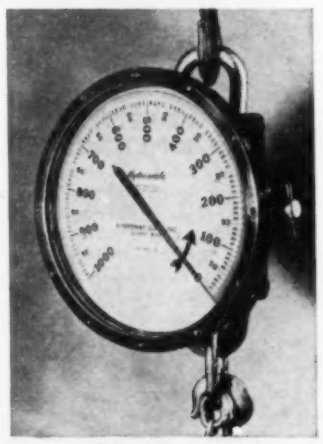
▲ For more details circle **NED-1 E3** on enclosed inquiry slip ▲

LIFT-TRUCK TRAY
easily handles awkward loads

Collection, storage, transfer and dumping of hard-to-handle materials are relatively easy with the Work-O-Matic multiduty material handling tray. The tray is open at both ends to permit load to overhang, and is made of 7-gage steel with double corrugations for added strength. In dumping operations, the tray is lifted to the discharge point, which remains constant throughout the entire dumping cycle. Made by **Union Metal Mfg. Co.,** Dept. NE, Canton 5, O.

▲ For more details circle **NED-2 E3** on enclosed inquiry slip ▲

HYDRAULIC SCALES
batching types measure pour-off



Equipped with reverse reading dials, the Hydroscale hydraulic hoist and crane scales are of the batching type for measuring pour-off of medium and large quantities of liquids and loose material. When a full container is lifted and the pointer takes position, the operator resets the dial so that the "O" coincides with the pointer. As contents are poured off, the pointer retreats, registering the amount of decreased weight directly. After one pour, the dial can be reset to zero. Scales are made in 500 and 1000-lb models with 12-in. dials. Stands are available for holding them when not in use. Made by **Hydroway Scales, Inc.,** 20624 W. Eight Mile Rd., Detroit 19, Mich.

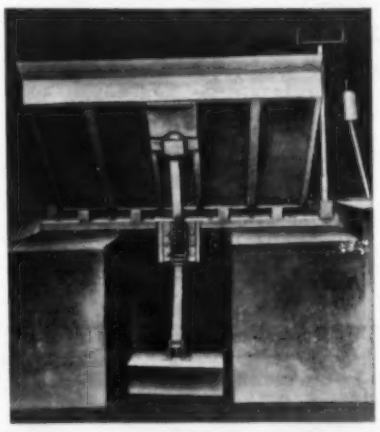
▲ For more details circle **NED-3 E3** on enclosed inquiry slip ▲

Handling Highlighted

Materials handling equipment is always an important segment of the editorial and advertising content of NEW EQUIPMENT DIGEST because of its importance to industry as an aid to economy, production and safe working conditions. Simultaneously with the Materials Handling Exposition in Philadelphia's Convention Hall on May 18-22, manufacturers of this equipment have released hundreds of new or improved products to speed or simplify the handling of materials. Even if you are unable to attend the Exposition, you'll find most of the new products highlighted in this issue. Future issues of course, will keep you informed of the latest in materials handling as well as in all other lines of equipment, materials and processes developed to serve all industry.

A. N. Gregg
EDITOR

ADJUSTABLE DOCK BOARD
easily installed, manually operated



Design of the Herco adjustable dock board requires only a recessed pit at the edge of the loading dock for installation. It is manually operated with four-way adjustment and has a counterbalance that operates through two heavy gear segments. This allows the counterbalance weight and arm to be directly under the board. Unit has a lock in the raised position to prevent dropping back. Up and down movement is by a lever, with a compensating weight holding the platform in place on the truck bed at all times. A 10-in. horizontal adjustment is provided by a lever-operated rack and pinion. Capacities of 20,000 and 30,000 lb and sizes of 48 x 72 in. and 60 x 72 in. are made by **Karl A. Herman Co.,** 333a W. Fulton St., Grand Rapids 5, Mich.

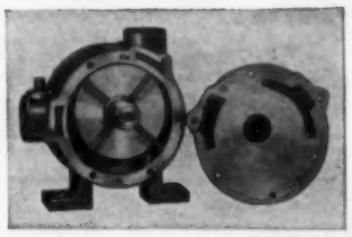
▲ For more details circle **NED-4 E3** on enclosed inquiry slip ▲

TROLLEY CONVEYOR
for general trolley applications

Wheels of the No. 4207 Loadstar trolley conveyor are made with steel or felt seals and hardened inner and outer races for chrome steel balls. Outer ball races are ground and tire surfaces are hardened. Standard bracket for the 4-in. trolley conveyor is the drop forged TB-4351, to which hooks, trays or any type of load carrier can be applied. Made by **Mathews Conveyer Co.,** 188 Tenth St., Ellwood City, Pa.

▲ For more details circle **NED-5 E3** on enclosed inquiry slip ▲

VACUUM PUMPS
eliminate oil contamination



In food handling equipment and paper and textile manufacturing where oil contamination is a problem, these oil-less pressure and vacuum pumps are highly practical. Pumps run absolutely dry, are equipped with sealed bearings and require no lubrication. Range is up to 11.5 cfm at 23 in. of vacuum to 21 psi pressure. Pump speeds range up to 1750 rpm. Made by **Leiman Bros., Inc.,** 167-A Christie St., Newark 5, N. J.

▲ For more details circle **NED-6 E3** on enclosed inquiry slip ▲

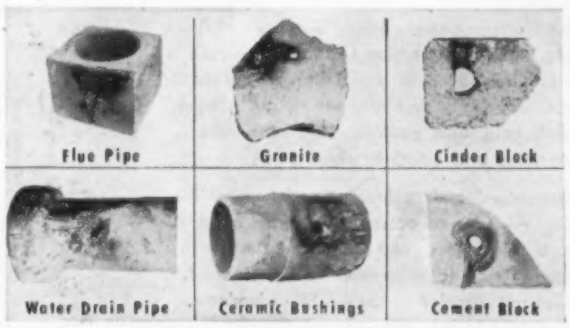
ADJUSTABLE FLOOR PLATES
for accurate assembly operations

Placed directly on the floor without superstructure and leveled by built-in adjusting screws, these floor plates provide a substantial and accurate base for assembly and other operations. They are furnished as single units up to 54 in. wide and 144 in. long. Larger plates may be built up of sections interlocked in one complete assembly. Made by **Challenge Machinery Co.,** Dept. NED, 1943 Thomas St., Grand Haven, Mich.

▲ For more details circle **NED-7 E3** on enclosed inquiry slip ▲

STONE CUTTING ARC-TORCH
self-energizing arc rod used with 400-amp dc welding machine

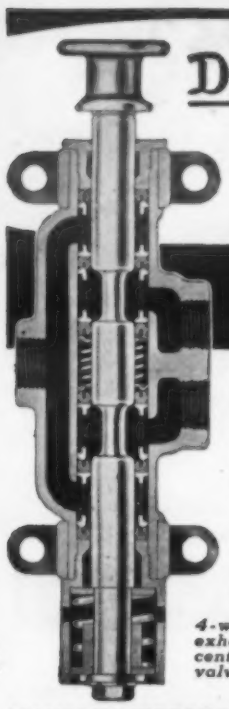
Stone, cement, concrete and refractory materials can be cut, pierced or melted by the DynArc process which utilizes an 8000° F DynaTrode self-energizing



arc rod which requires no ground and does not have to be struck upon metal. Arc, which operates in mid-air as well as it will upon stone, resembles a 5 to 8-in. torch flame in appearance. Heavy coating on rod, formulated to give thermo chemical interreaction with arc stream to react with nonmetallic material, is reduced more slowly than core. This forms crucible or tube through which energy is concentrated into fine tip.

Conventional direct current welding machine of 400-amp capacity or more, plus supply of rods are only equipment required for operation. Portability and adaptability are features of system. Developed by **Eutectic Welding Alloys Corp.,** ChemoTec Div., Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

▲ For more details circle **NED-8 E3** on enclosed inquiry slip ▲



Diversatility

IN CONTROL OF DOUBLE-ACTING AIR CYLINDERS

Only VALVAIR offers 2 Kinds of Neutral Valves

Manual or spring-return to neutral position are the two models by Valvair. Three types: (1) all ports blocked at neutral; (2) inlet and cylinder ports open to pressure, exhaust closed; (3) inlet closed, cylinder ports open to exhaust. 3-way and 4-way. Pipe sizes, 1/4" through 1". Six control assemblies: knob, lever, clevis, treadle, cylinder, solenoid.

4-way, piped exhaust, spring-centered neutral valve.

★ ★ ★

Get Bulletin "KN-5"

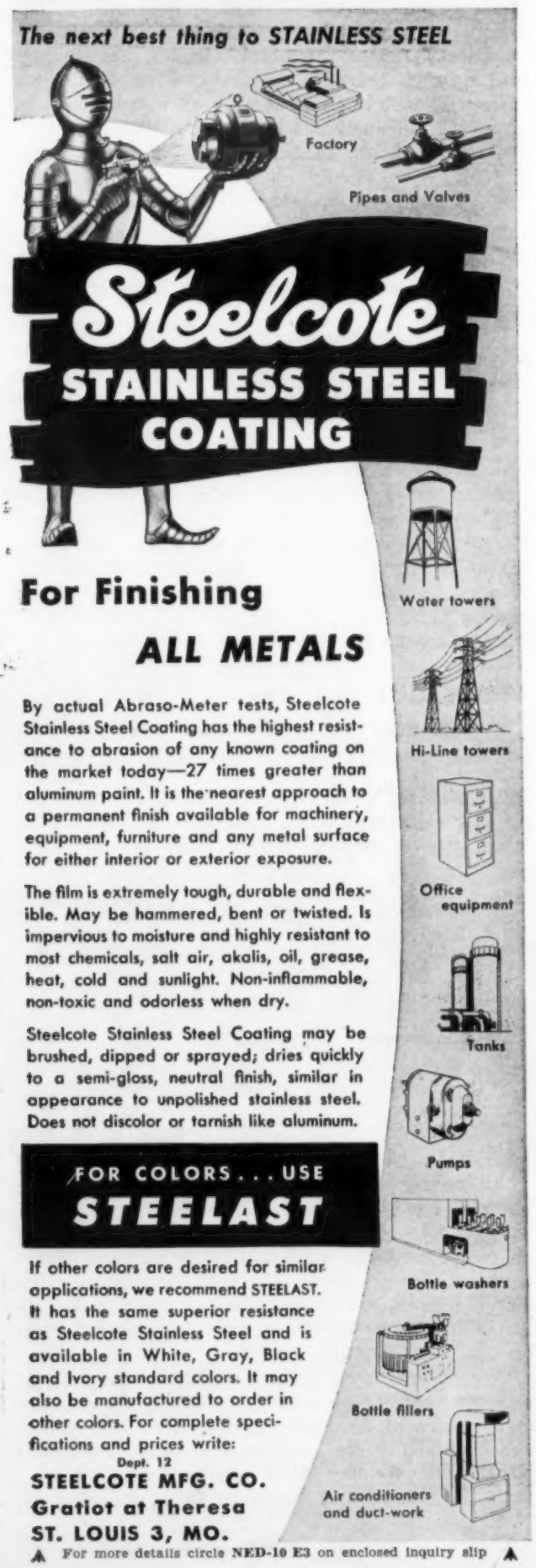
VALVAIR CORPORATION • *Affiliate: Sinclair-Collins Valve Co.* 947 BEARDSLEY AVE., AKRON 11, OHIO

REPRESENTATIVES IN PRINCIPAL CITIES

Rely Upon **Valvair** 2-WAY 3-WAY 4-WAY

▲ For more details circle NED-9 E3 on enclosed inquiry slip ▲

The next best thing to STAINLESS STEEL



Steelcote STAINLESS STEEL COATING

For Finishing ALL METALS

By actual Abraso-Meter tests, Steelcote Stainless Steel Coating has the highest resistance to abrasion of any known coating on the market today—27 times greater than aluminum paint. It is the nearest approach to a permanent finish available for machinery, equipment, furniture and any metal surface for either interior or exterior exposure.

The film is extremely tough, durable and flexible. May be hammered, bent or twisted. Is impervious to moisture and highly resistant to most chemicals, salt air, akalis, oil, grease, heat, cold and sunlight. Non-inflammable, non-toxic and odorless when dry.

Steelcote Stainless Steel Coating may be brushed, dipped or sprayed; dries quickly to a semi-gloss, neutral finish, similar in appearance to unpolished stainless steel. Does not discolor or tarnish like aluminum.

FOR COLORS . . . USE STEELAST

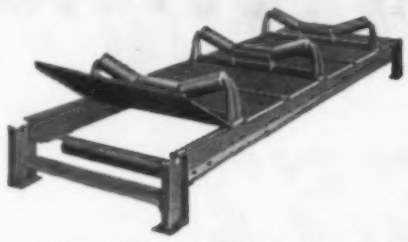
If other colors are desired for similar applications, we recommend STEELAST. It has the same superior resistance as Steelcote Stainless Steel and is available in White, Gray, Black and Ivory standard colors. It may also be manufactured to order in other colors. For complete specifications and prices write:

Dept. 12
STEELCOTE MFG. CO.
Gratiot at Theresa
ST. LOUIS 3, MO.

▲ For more details circle NED-10 E3 on enclosed inquiry slip ▲

SECTIONAL CONVEYOR for semipermanent and permanent uses is made in 12-ft lengths

Sections of channel type conveyor for permanent and semipermanent installations are made up in 12-ft lengths, with all parts interchangeable. Idlers, spaced to meet operating requirements, are heavy duty permanently lubricated type using either 4 or 5-in. diameter rolls. Channel side members can be either demountable type for portability or bolted type for permanent installation. Side members on hinged supports allow the conveyor to conform to uneven terrain.



Optional protective deck plates can be either removable type for installation and removal with troughing idlers in place or solid type held in place by the troughing idlers. Special sections can be furnished to allow for expansion and contraction due to wide temperature changes. Made by **Transall Inc.**, 154 N. Eleventh St., Birmingham 4, Ala.

▲ For more details circle NED-11 E3 on enclosed inquiry slip ▲

UNIVERSAL MICROSCOPE for research or routine work in metallurgy, petrography and biology

Speed, ease, and comfort are operational features of the Galileo ZC universal microscope. Magnifications from 4 to 3000X can be run with continuity on the camera screen; macro-photography can be done down to 5X without disturbing specimens; and without recentering, magnification of any objective setup can instantly be decreased or increased four times. Eyepiece viewing and photographing on both still and movie camera can all be done at the same time.

Using a vertical optical path, the unit stands 5 ft high, 25 in. wide and 31½ in. deep. It provides all facilities needed for macro and microphotography, polarization, phase, dark field, oblique and standard microscopy in transmitted and reflected light. It will also do multiple beam interferometry. Mounting and cabinet are shockproof. Made by **Opplem Co.**, 352A Fourth Ave., New York 10, N. Y.

▲ For more details circle NED-12 E3 on enclosed inquiry slip ▲

MOLUB-ALLOY "A METALLIC LUBRICANT" IMPERIAL OIL & GREASE CO. INC.

A NEW CONCEPT IN LUBRICATION

Gives BETTER Lubrication at LOWER Cost

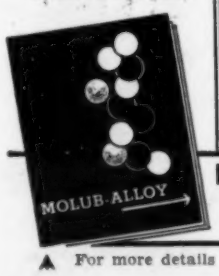
MOLYBDENUM DISULPHIDE MoS_2

MoS_2 is one of the most efficient lubricants ever discovered. MoS_2, one of several solids used in the manufacture of MOLUB-ALLOY, was selected because of its high lubricity values and its extremely low coefficient of friction.

Exhaustive laboratory and field tests have earned for Molybdenum Disulphide (MoS_2) a permanent and secure position as a lubricity factor of high quality.

MOLUB-ALLOY reverses the common concept; metallic solids provide positive lubricity while hydrocarbons, synthetic or volatile base materials are used simply as the vehicle for scientifically homogenized micron-sized solids which are self-lubricating. This new concept in lubrication sets up new performance standards under high pressures, temperatures and speeds and solves many lubrication problems confronting design engineers and operating and maintenance men. MOLUB-ALLOY not only gives *better* lubrication, it effects substantial economies in maintenance labor, reduces down-time, increases the life of equipment and aids in cutting power costs. These and other savings make MOLUB-ALLOY the most economical lubrication you can use.

Send for your copy of the new MOLUB-ALLOY Catalog and the name of your nearest MOLUB-ALLOY Distributor.

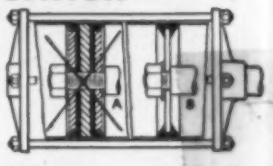


IMPERIAL OIL & GREASE COMPANY INC.
6399 Wilshire Blvd., Los Angeles 48
Telephone WEbster 3-9355

▲ For more details circle NED-13 E3 on enclosed inquiry slip ▲

Double Acting One-Piece PISTON

HERE'S REAL SIMPLIFICATION



A complete one piece, Double Acting PISTON—so skillfully designed that 1 part (B) actually replaces 5 to as high as 7 parts, ordinarily used in conventional assembly (A).

This radically new ALLIS Piston is a unit piston plate and packing. Cup Members are constructed of highly resistant synthetic rubber, molded integrally to a solid metal plate. Time Tested and Proven—Highly Efficient with constant Lip Sealing action. Cannot be installed incorrectly.

Available in all standard cylinder sizes,—for Hydraulic and Pneumatic mediums such as oil, water, air, etc. Now being used by machinery manufacturers as standard or original equipment. Write for details today.

We produce MOLDED MECHANICAL RUBBER PRODUCTS . . . Bellows, Boots, Packings, Seals, Diaphragms, Dampeners, etc. Each part is Laboratory Controlled and Formulated to meet your operational requirements.

Write today for our illustrated booklet—32 pages of vital information

ALLIS RUBBER CORPORATION

Tel: MOnroe 6-5050 130 N. Green Street Chicago 7, Ill.

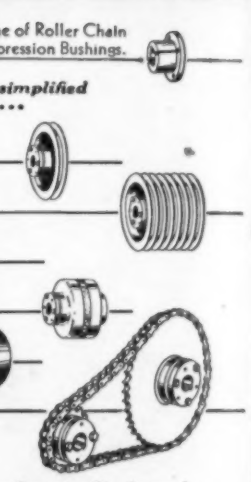
▲ For more details circle NED-14 E3 on enclosed inquiry slip ▲

Mr. Maintenance Man...

HERE IS YOUR ANSWER TO COMPLETE PLANT STANDARDIZATION OF POWER TRANSMISSION EQUIPMENT

BROWNING has added a complete line of Roller Chain Sprockets with Malleable Split Taper Compression Bushings.

NOW you have the same simplified bushing system for...



SINGLE GROOVE SHEAVES
MULTIPLE GROOVE SHEAVES
RIGID COUPLINGS
FLEXIBLE COUPLINGS
PAPER PULLEYS
and now ROLLER CHAIN SPROCKETS

JUST THINK... One Simplified Bushing System throughout your entire plant

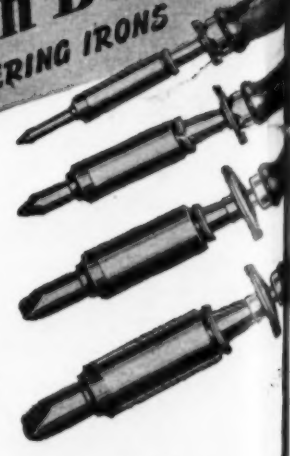
Only your Browning Distributor offers this service...there is one near you. **Write for Catalog GC101.**

BROWNING MANUFACTURING COMPANY MAYSVILLE • • KENTUCKY

▲ For more details circle NED-15 E3 on enclosed inquiry slip ▲

EXPERIENCE SINCE 1894

Built into **American Beauty** ELECTRIC SOLDERING IRONS



FOR MORE YEARS OF EFFICIENCY

Since 1894 these electric soldering irons have demonstrated their efficiency and durability . . . Manufacturing plants, service, maintenance and repair shops choose them for their durability and efficiency.

TEMPERATURE REGULATING STAND

A thermostatically controlled device for maintaining an electric soldering iron at any desired heat while at rest. Adjustable from low or warm to full working temperature.

NO. 117-2 Write for Literature

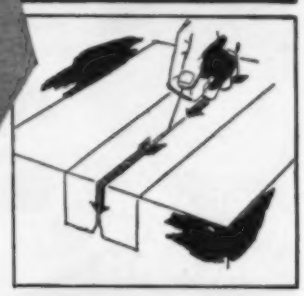
AMERICAN ELECTRICAL HEATER COMPANY
DETROIT 2, MICHIGAN

▲ For more details circle NED-16 E3 on enclosed inquiry slip ▲

The GUMMED PRODUCTS Company ANNOUNCES

Amazing New JET TAPE

World's fastest and easiest-opening GUMMED TAPE!



• Jet Tape now makes it easy to open boxes by a simple pull on the string in the center of the tape. Zip! —and the box is open!

In every industry, Jet Tape can be used to improve many present packaging methods. Write today for descriptive literature and further data on Jet Tape for your particular packaging application.

Pull the string and ZIP— it's open!

The GUMMED PRODUCTS Company
1953 S. UNION ST., TROY, OHIO

For more details circle NED-17 E3 on enclosed inquiry slip

AIR CIRCULATORS
now feature aluminum louvers

Improved series of Strato-Liminator draft-free air circulators now feature aluminum instead of steel louvers. Capacity is 1800 cfm. Weight is substantially reduced and installation is thus made easier. Units are merely suspended from ceiling and connected to nearest outlet. The air diffusing louvers tend to circulate natural air without harmful drafts. Made by **Wilster, Inc.**, 1325 E. 152nd St., East Cleveland 12, O.

For more details circle NED-20 E3 on enclosed inquiry slip

DIRECT-DRIVE DUCT FAN
for temperatures up to 110°F

Power Line Direct DriveDuct Fan

For factory, mill, mine, and duct installations, type PLFX direct-drive duct fan is built to Department of Commerce standard CS 178-51. It is built into a steel drum having rear and front mounting flanges and is fitted with ball bearing, totally enclosed motor. Blades are nonoverloading, made of cast aluminum. Sizes are from 16 in. to 48 in. with capacities from 2900 to 37,500 cfm. It is also available as type PLDX, belt driven with belt and motor out of air stream, or for higher temperature operation on special order. Made by **Chelsea Fan & Blower Co.**, Dept. NED, 639 South Ave., Plainfield, N. J.

For more details circle NED-21 E3 on enclosed inquiry slip

OVERHAULING HOIST WEIGHT
adds weight to single hoisting line

Use of Miller overhauling weight facilitates getting a single hoisting line down from the top of a rig, thereby making operations using such equipment more efficient. Weight incorporates a ball bearing swivel for load control on any weight lifting equipment. Three races of ball bearings assure free-turning under heavy loads. By swiveling freely, unit prevents loads from spinning or getting out of control, besides eliminating twisting forces. Weights are offered in five sizes from 7-in. diameter, 62-lb ball to 13-in. diameter, 322-lb ball. All are available with optional latched hook. Made by **General Machine & Welding Works**, 1110 E. Second St., Pomona, Calif.

For more details circle NED-22 E3 on enclosed inquiry slip

Sizes and Capacities to 10 tons

CHASE TURNTABLE
Turns, Products, Trucks, Cars

CHASE Turntables are power driven, can be equipped with steel rails, grooved or top surfaced to your specifications. Diameters up to 8'. Indexing and locking device available. Requires a pit only 15" deep. Turns autos in show rooms, conveyor line products, rolling stock. Has many applications. Write for specification sheets.

Industrial Car and Truck Builders for Over 50 Years.

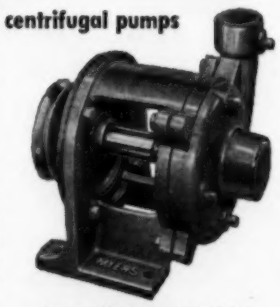
CHASE FOUNDRY & MANUFACTURING CO.
3000 PARSONS AVENUE • COLUMBUS 7, OHIO

For more details circle NED-18 E3 on enclosed inquiry slip

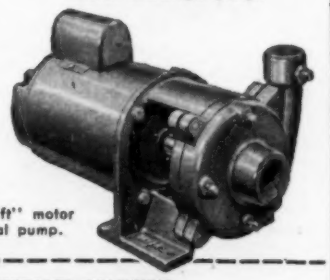
New Myers "Centri-Thrift"
General Purpose Pump

An addition to present line of centrifugal pumps

Special low cost, centrifugal pump for bottle washers, booster service, air conditioners, boiler feed service, etc. Myers quality features: Removable, replaceable bronze wearing ring; separate stainless steel pump shaft extended through open bracket for quick inspection and accessability. Bronze impeller is locked to shaft.


Myers "Centri-Thrift" V-belt driven centrifugal pump.

Capacity to 50 gallons per minute. Heads up to 92 feet. Easily handles 180° water. Suction opening 1¼" pipe; discharge opening 1" pipe and can be rotated in any of four positions.


Myers "Centri-Thrift" motor mounted centrifugal pump.

MYERS

IMMEDIATE DELIVERY
Write for complete information and prices.
THE F. E. MYERS & BRO. CO.
243 Fourth St., Ashland, Ohio

For more details circle NED-19 E3 on enclosed inquiry slip

This ball bearing screw jack is only 7 inches high—can lift 15 tons 2½ inches. It weighs 22 lbs.

Designed especially for those hard-to-get-at-spots too small for a big, heavy jack—the Duff-Norton "Shorty" has made friends in shops, mills, shipyards, and on construction jobs.

For complete specifications on the "Shorty" and other dependable Duff-Norton Journal Jacks, write the world's oldest and largest manufacturer of lifting jacks for Bulletin AD12 N, The Duff-Norton Manufacturing Company, P.O. Box 1889, Pittsburgh 30, Pa. Canadian plant—Toronto 6, Ontario.

DUFF-NORTON *Jacks*

"GIVING INDUSTRY A LIFT SINCE 1883"

For more details circle NED-23 E3 on enclosed inquiry slip

BE READY FOR *Every* CLEANING NEED

IDEAL BLO-R-VAC

Power-packed and with highest cleaning efficiency, IDEAL Blo-R-Vac speeds *all* your cleaning jobs! Low in first cost, it's actually *three rugged cleaners in one!* Vacuums lint, dirt, picks up water. Promotes scrap salvage—metal particles stay in big tank; lighter particles go into dust-tight bag. Power unit serves as a separate blower-sprayer or hand type cleaner. Full selection of attachments. 1½ or ⅔ H.P.

Sold Through America's Leading Distributors
Canadian Distributor: Irving Smith, Ltd., Montreal

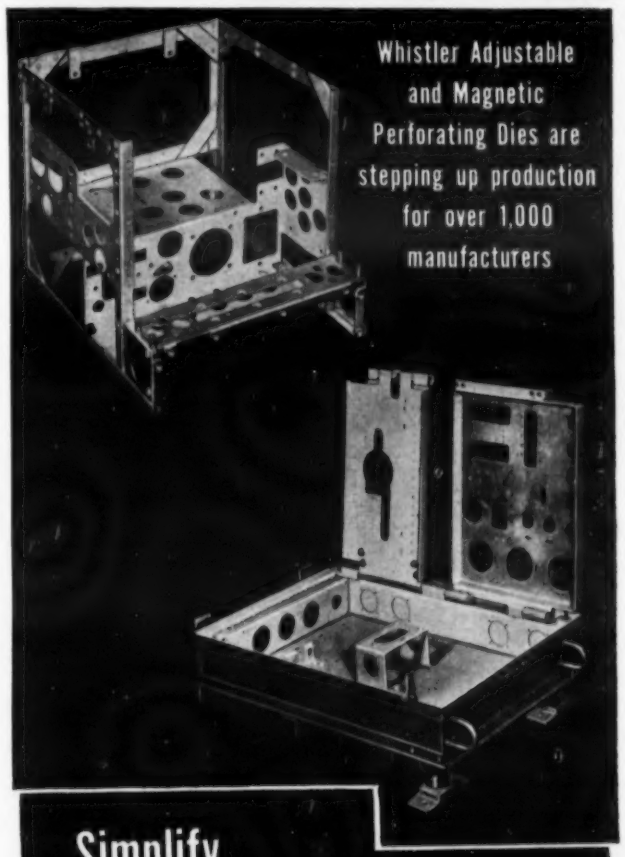
Triple Value!
A "Tank-Type" Cleaner
A "Hand-Type" Cleaner
A Blower-Sprayer

All in One!

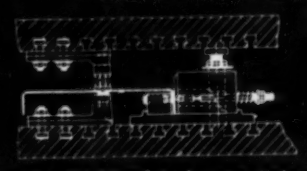
CONVERTS IN A JIFFY! . . . from a "tank-type" cleaner to a "hand-type" cleaner or blower.

TRY IT FREE!
IDEAL INDUSTRIES, INC.
1032 Park Ave., Sycamore, Illinois
Arrange FREE DEMONSTRATION of your new BLO-R-VAC in our plant.
Name_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-24 E3 on enclosed inquiry slip



Simplify Complicated Piercing Operations



Use this HU-50 90° Perforating Unit on the same job with other Whistler Dies ...often saves extra press operations.

USE WHISTLER Adjustable and Magnetic Dies for perforating, notching and slotting sheet metals... fast, accurate and cost cutting. Complicated patterns can be set up quickly. Hole arrangements can be changed in the press...without waiting and at no extra die cost. New HU-50 units, that pierce at 90° angle, can be used in conjunction with standard perforating equipment. Fewer press operations are necessary.

Re-use the same dies in different arrangements on many jobs. Punches and dies are interchangeable.

Whistler Adjustable Dies can be used in practically every type press. Standard sizes and shapes of punches and dies available up to 3 inches. Special sizes and shapes to order.

S. B. WHISTLER & SONS, INC.

750 Military Road
Buffalo 23, N. Y.

For prices and application data on this modern way to speed production and cut unit costs, write for these illustrated Whistler catalogs.

For more details circle NED-25 E3 on enclosed inquiry slip

STEEL

Every Kind

Some steel products are in short supply but over-all stocks are still large, diversified

NEARBY STOCKS INCLUDE:

BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—U. M. & sheared, Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types & coatings
TUBING—seamless & welded, mechanical & boiler tubes
STAINLESS—Allegheny sheets, plates, bars, tubing, etc.
REINFORCING bars & access.
BABBITT bearing metal
MACHINERY & TOOLS for metal fabrication

RYERSON

Joseph T. Ryerson & Son, Inc. Plants: New York, Boston, Philadelphia, Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee, St. Louis, Los Angeles, San Francisco Spokane, Seattle

For more details circle NED-26 E3 on enclosed inquiry slip

STEEL STRAPPING MACHINE
speeds strapping operation, handles many package sizes

Power-driven steel strapping machine will speed high-volume flat steel strapping operations and reduces operator fatigue. Strapping joints are secured by spot welding. Table height of 31-in. permits it to be installed in standard-height conveyor systems. A full range of strap tensions up to 750 lb can be obtained.

Roller sections in the table top of the machine facilitate location of packages over the tensioning and welding unit, eliminating the necessity for manual lifting. All operations formerly requiring physical effort are mechanized and skilled labor is not necessary. Women can easily strap packages at high volume and to uniform strap tensions without fatigue. The built-in reel stand for strapping stock can be quickly and easily loaded, also without manual effort. Made by **Acme Steel Co.**, 2822 Archer Ave., Chicago 8, Ill.

For more details circle NED-29 E3 on enclosed inquiry slip

Filtering Supplies

Low cost throwaway type cartridges using cellulose, waste or fullers earth. Maximum efficiency and safety assured by use of complete steel enclosure.

Leveling Jacks

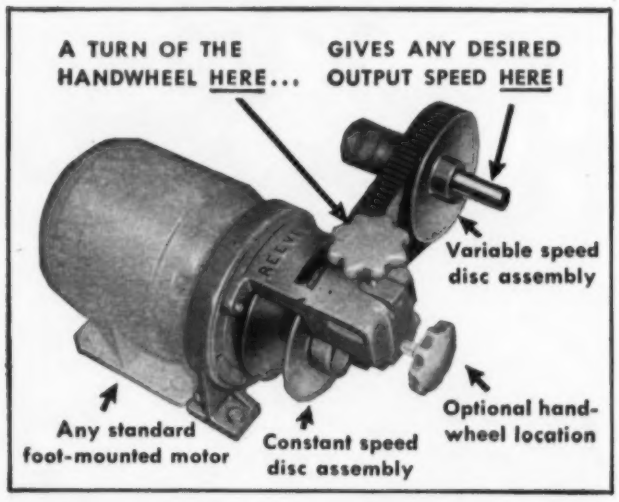
FOR YOUR HEAVY MACHINES

The simple, economical, time-saving way to level heavy machinery. Available in two sizes (3 & 5 ton capacities). WRITE FOR COMPLETE INFORMATION.

THE FILTER & INJECTOR CO.
P. O. BOX 626 SPRINGFIELD, MO.

For more details circle NED-32 E3 on enclosed inquiry slip

NEW! REEVES Flexi-Speed Drive



Mounts in any position . . . drives in any direction . . . gives any speed within 8:1 range . . . available in ½, ¾ and 1 hp. *Low Price!* Write today for details to Dept. NED91-V 532.

REEVES PULLEY COMPANY • COLUMBUS, INDIANA

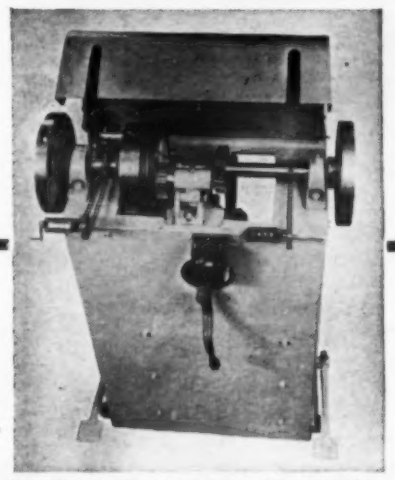
For more details circle NED-27 E3 on enclosed inquiry slip

PORTABLE TYPE COMPOSER
offered with wide type face choice; also reproduces drawings and photos

Contact photography is used by the Typro portable type composer to produce sharply defined lines of copy in a wide choice of type faces in sizes from 144 point down to 10 point or smaller. Reproduction is mechanical from master film strips encased in interchangeable magazines. Machine has an automatic developer unit and requires no dark room. Training time is about 10 minutes. Fonts consist of 93 characters, including caps, lower case, fractions, percentages and others.

At least 12 fonts can be contained in one magazine, which snaps into place without threading or splicing. Machine has an adjustment for mechanical justification and line spacing and, because of its common base line, permits intermixing of fonts. Duplicate copies, reverses and screened effects can be reproduced without resetting copy. Also reproducible are mathematical or chemical symbols virtually unlimited in length, logotypes, borders, line drawings, halftones, photographs and microfilm. Made by **Halber Corp.**, 4153 Montrose Ave., Chicago 41, Ill.

For more details circle NED-30 E3 on enclosed inquiry slip



★
★
★

No. 3 Ace Coil Winding Machine

The latest in coil winding equipment—built the famous ACE way to give you the best in fast production, better work and years of profitable service.

Cabinet of steel with hood.
Double-seal ball bearings in motor, gear box, clutch and main shaft.
Double-V belt drive gives extra pull and power.
Lever-shift 4-speed gear box.
ACE Easy Action no-grab clutch and brake combination.
Veeder-Root rotary chain drive counter.

Write for descriptive bulletin . .

ARMATURE COIL EQUIPMENT, INC.
2607 VEGA AVENUE
CLEVELAND 13, OHIO

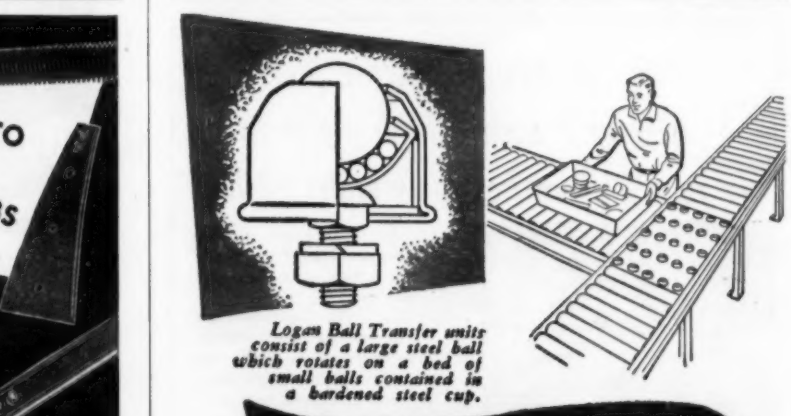
For more details circle NED-33 E3 on enclosed inquiry slip

15,000 TYPES, SIZES & RATINGS TO MEET YOUR HEATING NEEDS

Chromalox Electric Heaters are the low cost answer to heating liquids, gases, viscous fluids, dies, molds, platens, moving parts and literally hundreds of other jobs requiring dependable, accurate, easily controlled heat. If you are not familiar with the many time and money saving applications possible with Chromalox Electric Heaters, get the complete details on how these compact units can fit into your plant operations.

learn more about electric HEAT

Write for the illustrated booklet "100 Ways to Apply Electric Heat."



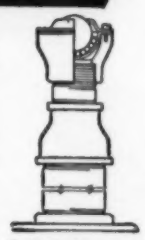
Logan Ball Transfer units consist of a large steel ball which rotates on a bed of small balls contained in a hardened steel cup.

BALL TRANSFERS

Logan Ball Transfers are handling equipment, designed primarily for use in transferring at right angles or where it is desired to rotate packages without lifting. Can be adapted to other applications. You can buy separate ball assemblies from stock or complete tables made-to-order.

Logan offers Ball Transfer units in several different sizes.

Further information on request.



Ball Pedestal units also available for handling sheets and plates.

Logan Conveyors

LOGAN CO., 215 CABEL ST., LOUISVILLE, KY.

For more details circle NED-31 E3 on enclosed inquiry slip

Dear Sir:

NOW...You too, can get the NEW M & E Exhaust Fan Guidebook!

When M & E's new Exhaust Fan GUIDEBOOK was published, distribution was necessarily limited to M & E's present users, and 21,000 of them ordered it sight unseen, before the first release was made from the printer.

BUT NOW, you, too, can become a user of this new and different Exhaust Fan Catalog—which is not available without request. And you can do it on the time-saving basis as explained below.

In 12 brief, sharply written pages it brings you the FACTS and KNOWLEDGE you need to deal with in today's ventilation problems. And it does it in a *Minimum of time*. M & E EXHAUST FAN CATALOG takes only a few minutes of your reading time for each situation you are confronted with—and gives you more for each minute you use it than any other catalog we know.

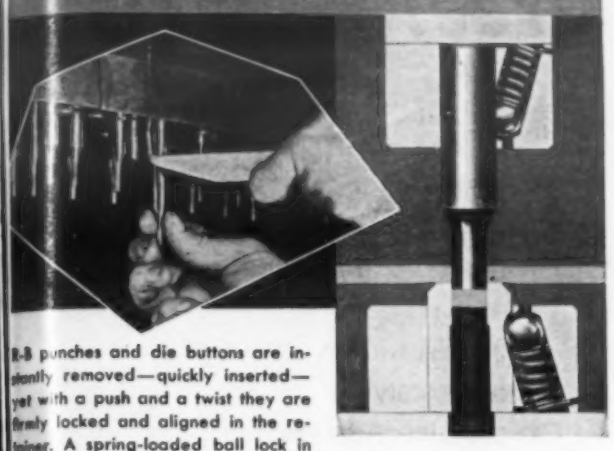
BUT, we don't ask you to take OUR word for it. Although the value of this purchasing catalog would be worth many dollars, we invite you to try out M & E's Exhaust Fan Catalog on a FREE basis. Start using it, and see for yourself what it can do for you.

Just circle the NED number shown below, on the ENCLOSED POSTAGE PAID card—and find out how useful a catalog can be.

M & E MANUFACTURING COMPANY
2581 Winthrop Avenue • Indianapolis 5, Indiana

For more details circle NED-34 E3 on enclosed inquiry slip

In DIE OPERATION Save Time



R-B punches and die buttons are instantly removed—quickly inserted—yet with a push and a twist they are firmly locked and aligned in the retainer. A spring-loaded ball lock in R-B retainers produces the positive radial alignment and vertical locking; no additional keying is necessary. Through standardization of unique design concepts, R-B punches and dies cut press down time for replacements to a minimum.

Tool standardization is the basis for efficient and economical production. With R-B you get the accepted standard of the sheet metal industry—in standard design features that save in engineering, die construction and operation.

For further information on how you can save time in die operation, write to—

ALLIED PRODUCTS CORPORATION
RICHARD BROTHERS DIVISION
Dept. 66 • 12629 Burt Road • Detroit 23, Michigan

▲ For more details circle NED-35 E3 on enclosed inquiry slip ▲

Electrolizing

REDUCES WEAR, ABRASION, CORROSION OF PARTS...GIVES 200% TO 800% LONGER LIFE

If your problem is wear, abrasion or corrosion of metal parts, quite likely Electrolizing can provide the solution.

A tested and proven surface treatment used by many major companies since 1945, Electrolizing is increasing the life of such parts as hydraulic pistons, shafts, valves, impellers, rotors, blades, screw jacks, spindles from 200% to 800%.

A CASE IN POINT:

Electrolizing is specified for 38 jet aircraft parts. Laboratory and field tests definitely established the desirability of *Electrolizing* pistons, valves, shafts, bushings, arms and similar parts which were subjected to severe wear, abrasion and corrosion.

Our staff engineers are available for consultation without obligation. Write for new booklet describing *Electrolizing* and its advantages.

THE Electrolizing CORPORATION
1505 EAST END AVENUE • CHICAGO HEIGHTS, ILLINOIS
PLANTS:
Providence 1, R. I. 148 W. River St. — Cleveland 10, Ohio 1650 Collamer Rd. — Chicago Heights, Illinois 1505 East End Ave.

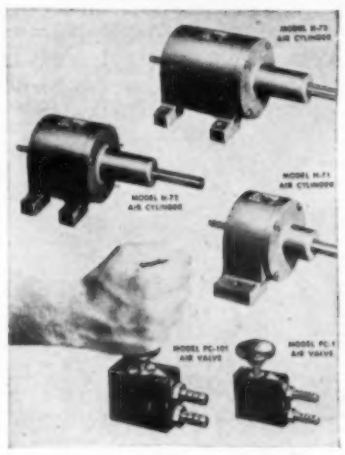
▲ For more details circle NED-36 E3 on enclosed inquiry slip ▲

SMALL POWER TRACTOR 'handles wheel trailers or containers

Electric powered Grip-All tractor incorporates an electric-hydraulic clamp which can grip all types of trailers and hitches. The lower clamp can be adjusted in or out depending on the position and height of the container or hitch. The upper clamp comes down to complete the grip. The tractor has a draw bar pull of approximately 700 lb. Made by the **Moto-Truc Co.**, 1961 E. 59th St., Cleveland 3, O.

▲ For more details circle NED-37 E3 on enclosed inquiry slip ▲

AIR CYLINDERS & VALVES available in variety of models



Three spring-return air cylinders and two air valves are new additions to line of air-operated devices. Model H-71 air cylinder has a power factor of seven times line pressure, 1-in. stroke and 3-in. bore. Models H-72 and H-73 have the same power factors and 2-in. stroke, 3-in. bore and 3-in. stroke, 3-in. bore, respectively. First of two air valves is model PC-101 with palm or fist operated button mounted on the valve plunger. It has 5/16-in. opening hose nipples for 3/8-in. ID hose. Compact, easily mounted model PC-1 air valve is quick-acting with cylinders up to 3-in. bore. It has nipples for 1/4-in. ID hose. Made by **Mead Specialties Co.**, Dept. CV-40, 4114 N. Knox Ave., Chicago 41, Ill.

▲ For more details circle NED-38 E3 on enclosed inquiry slip ▲

We Beg Your Pardon

In the description of the new 10-ton water chiller for industrial air conditioning, Item NED-159 B3 in the Feb. 1953 issue, the subhead read as follows: "10-ton unit replaces 25-ton model." Actually the 10-ton model is an addition to the water chiller line which includes the 25-ton unit. Line is made by **Servel, Inc.**, 119 N. Morton Ave., Evansville 20, Ind.

▲ For more details circle NED-39 E3 on enclosed inquiry slip ▲

change from cord to Cordomatic* TROUBLE LIGHT REELS

* Reg. U.S. Pat. Off.

GIVES YOU LIGHT WHEN YOU WANT IT—WHERE YOU WANT IT!

$9.95 FOR 20' EXTENSION MODELS
25' MODELS—$14.95
40' MODELS—$19.95

√ MODERN √ EFFICIENT √ ECONOMICAL

No more tangling in a clumsy wire "booby trap" that's always in your way, causing short tempers and painful accidents! Save time, trouble and money the Cordomatic way. Cordomatic works like a window shade—just pull out the length of cord you need, and it locks in place automatically! A flick of the wrist, and z-z-zip, it rewinds itself. One Cordomatic Trouble Light Reel will outlast many ordinary drop cords.

Available Through Your Local Automotive Jobber

No installation costs. Just hang up, plug in!

Foolproof "Gravity Action" Recoil Mechanism . . . locks at any desired length!

U/L Approved #18-2 S.V.O. Neoprene jacketed, kink-proof cord! Oil and water resistant.

New "Stubby" Handle! 100% Neoprene with protector ears.

New type "swing open" guard.

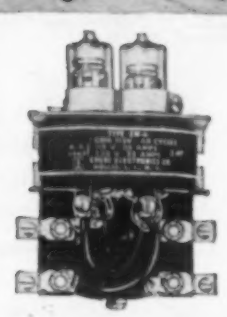
Unconditionally guaranteed for one year!

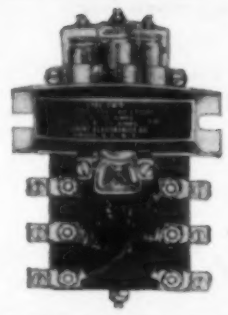
Cordomatic DIVISION OF THE VACUUM CLEANER CORP. OF AMERICA
PLANT NO. 2: CROSKEY ST. & INDIANA AVE.
PHILADELPHIA 32, PENNA.

▲ For more details circle NED-40 E3 on enclosed inquiry slip ▲

ec Mercury Plunger Relays FOR 2 and 3 POLE APPLICATIONS

• Hermetically Sealed
• Silent Operation
• Explosion Proof
• No Maintenance
• Mercury–Mercury Contact





The many advantages of mercury plunger construction are now available in relays for 2 and 3 pole applications.

Compact size and high current handling capacity (up to 60 amps) permits realistic savings in cost and space. For complete details just ask for our free catalogue—and don't forget—our engineering division is ready to serve on any of your relay problems.

EBERT ELECTRONICS CO.
185-09G Jamaica Ave., Hollis 7, N. Y.

▲ For more details circle NED-41 E3 on enclosed inquiry slip ▲

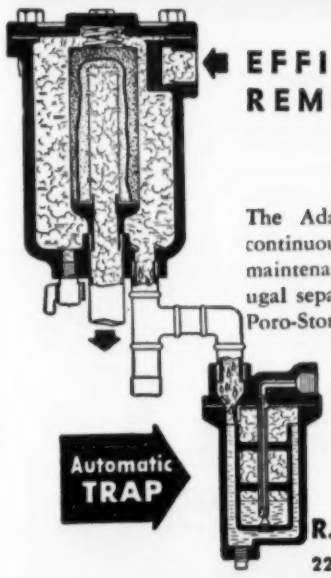
NEW "Lifetime" Dial Thermometers

You're always sure of accurate temperature readings with this new Foxboro "Lifetime" Dial Thermometer. Welded "one-piece" bulb and connecting capillary tubing of 316 Stainless Steel prevent corrosion from liquids, fumes or vapors. Needs no protective tubing. Tightly sealed 5" aluminum alloy case. Available in standard ranges to 1000°F. Easy-to-read scale 12" long. Write for details. The Foxboro Company, 665 Neponset Ave., Foxboro, Mass., U.S.A.

FOXBORO Reg. U.S. Pat. Off. DIAL THERMOMETERS

▲ For more details circle NED-42 E3 on enclosed inquiry slip ▲

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:
OIL, WATER
PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 176.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS Poro-Stone AIR FILTER

▲ For more details circle NED-43 E3 on enclosed inquiry slip ▲

What do you know about the *Moly-sulfide* LUBRICANT?
A LITTLE DOES A LOT

You may have heard about a highly successful solid-film lubricant which is giving remarkable results in the shop and in the field.

In one 40-page booklet we have collected 154 detailed case-histories describing how difficult lubrication problems have been overcome by molybdenum sulfide. If you wish to be up to date about this solid-film lubricant, write for a free copy now.

THE LUBRICANT OF MANY USES

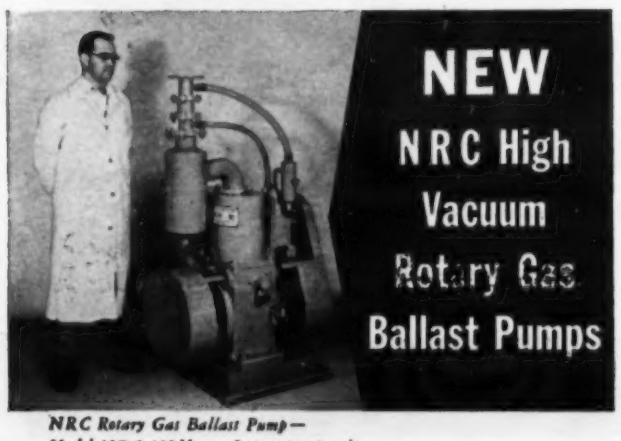
Moly-sulfide
A LITTLE DOES A LOT
SEND FOR THIS FREE BOOKLET TODAY

Climax Molybdenum Company
500 Fifth Avenue · New York City 36 · N.Y.

For more details circle NED-44 E3 on enclosed inquiry slip

NOW—
ROTARY VACUUM PUMP USERS:

End Your Water Vapor Troubles



NRC Rotary Gas Ballast Pump—
Model NRC 100M — a 2-stage pump unit

- Maintains fast pump down time
- Eliminates oil reclaiming units
- Provides greater capacity under 1 mm Hg
- Requires up to 80% less oil charge
- Capacities from 1¼ cfm to 400 cfm
- Pressures down to 10^{-4} mm Hg

This is important news for every user of rotary vacuum pumps. At last, an "anti-water-vapor" pump that does not blank off at increasing pressures because it is trying to pump condensable vapors.

Water vapor is no problem to the new National Research Rotary Gas Ballast Pump. It operates on a principle that *prevents* the water vapor from condensing and contaminating the pump oil.

The pump is available in capacities from 1¼ cfm to 400 cfm; pressures down to 10-4 mm Hg; a full line of vane, piston-type and 2-stage pumps.

Send in the coupon today for your copy of the new bulletin that gives a full explanation of the Gas Ballast principle and complete engineering data on the construction and operation of the NRC Rotary Gas Ballast Pumps.

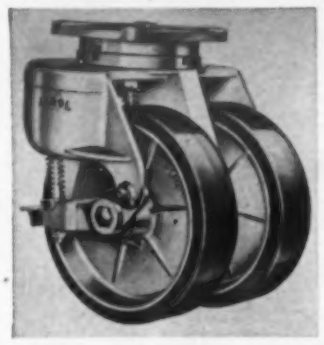
NRC
National Research Corporation
EQUIPMENT DIVISION, 70 *Memorial Drive, Cambridge, Mass.*

Send me more facts about the NRC Rotary Gas Ballast Pump ☐ Have your Salesman call ☐

Name _____
Title _____
Company _____
Address _____

For more details circle NED-45 E3 on enclosed inquiry slip

SHOCK-ABSORBING CASTER
has 12-in. wheels and 1-ton capacity



Applicable to plant and field transportation problems where ease of movement over uneven surfaces is desired, this individually sprung shock-absorbing dual caster has a load range capacity up to 2000 lb. Both 12-in. wheels are in direct contact with the surface at all times. Units are made of heat treated cast aluminum alloy and are equipped with Timken thrust and tapered roller bearings. They are factory lubricated and equipped with coil springs that are easily changed to meet load ratings of specified jobs. Solid tires of molded rubber will resist fats, oils, detergents and acids. Caster will be available with 10-in. wheels. Made by **Aerol Co.**, Dept. N, 2525 San Fernando Rd., Los Angeles 65, Calif.

For more details circle NED-46 E3 on enclosed inquiry slip

TRUCK UNLOADER
for standard trailers and trucks

Driver can handle this flatbed of masonry blocks weighing about 16 tons in less than 20 minutes with this Superlite Unloader attachment. It has also been

adapted for unloading cement or clay tile, sacked cement, barrels and drums, brick and clay, tile products, crates, boxes, machinery and equipment. It mounts on any standard truck or trailer and can be bridged for truck-to-trailer operation. Powered by air-cooled gasoline engine, the carriage is hydraulically operated through positive chain drive. The unit can be controlled from either side of the truck. Made by **Builder's Equipment Co.**, 4012 N. Central Ave., Phoenix, Ariz.

For more details circle NED-47 E3 on enclosed inquiry slip

Magnetic Chucks

Sundstrand Magnetic Products Co.—Circular on Power-Grip magnetic chucks has five well-illustrated sections describing chucks and their suitability for heavy duty milling, production milling, production and general grinding operations. Full ordering information is also included.

For more details circle NED-48 E3 on enclosed inquiry slip

IT'S LIVE
YOU MUST SEE IT!
AT THE
MATERIALS HANDLING EXPOSITION
PHILADELPHIA, MAY 18-22
BOOTH 1455

A NEW CONCEPT IN—
MOVEMENT

Here is a totally new concept in PRODUCT MOVEMENT . . . with lower original cost, reduced maintenance cost . . . safer, cheaper movement of products, cases, boxes, cartons, bundles, sheets, pans, straight away — or around curves, but applications are limited only by your imagination.

If you can't see our booth at the Material Handling Show, better write at once for folder — today!

ANOTHER FIRST FOR ALVEY-FERGUSON OF CINCINNATI

A-F THE ALVEY-FERGUSON COMPANY
Since 1901 — First in the Field of Product Handling Equipment
36 Disney Street Cincinnati 9, Ohio

For more details circle NED-49 E3 on enclosed inquiry slip

free! NEW FISHER CATALOGS

Illustrated literature with technical data never before available.

- ☐ PIPE FINDERS
- ☐ LEAK DETECTORS
- ☐ WATER LEVEL INDICATORS
- ☐ WELL TESTERS
- ☐ RADIOTELEPHONES
- ☐ RADIO RECEIVERS
- ☐ RADIO DIRECTION FINDERS
- ☐ GEOPHYSICAL EQUIPMENT
- ☐ GEOPHYSICAL EXPLORATION SERVICE

WRITE FOR YOUR COPY TODAY.

Fisher RESEARCH LABORATORY INCORPORATED PALO ALTO CALIFORNIA

For more details circle NED-50 E3 on enclosed inquiry slip

GRAVITY FEED OILERS
WITH
"Lucite" Reservoir

This popular oiler is available from ½ oz. to 2 gal. in capacities in many styles including Multiple and Electro Oilers

Write for Bulletin

CONSULT US FOR ADVICE REGARDING YOUR OILING PROBLEM

OIL-RITE CORPORATION
2364 WALDO BLVD.
MANITOWOC, WISCONSIN

For more details circle NED-51 E3 on enclosed inquiry slip

PORTABLE MIXERS
. . . offer ECONOMY

Operating expenses dip to a new low when you choose Portable Mixers from the complete Eastern Series. Available from 1/20 to 5 H.P. with a variety of speeds and motor enclosures. Your small initial investment pays rich dividends in economy.

For complete mixer selection information write for Eastern Catalog 510-A

Eastern INDUSTRIES, INC.
296 ELM ST., NEW HAVEN, CONN.

For more details circle NED-52 E3 on enclosed inquiry slip

Engineered Air Regulation

KENDALL MODEL 30

Precision Air Pressure Regulator
AVAILABLE ¼" or ⅜" N. P. T.
RANGES 0-10, 30, 60, 100 PSIG
Send for BULLETIN 9523

FIRST TRUE HIGH PRECISION AIR PRESSURE REGULATING VALVE AT NEW LOW COST

FEATURES:
☆ Perfect Balance — complete immunity from upstream pressure changes ☆ Large Flow Capacity (35CFM) — automatic relief — flow compensation ☆ Small Physical Size ☆ Removable Stainless Steel Valve Trim ☆ Deep Convolution Constant Area Diaphragms made by our own Bellofram Division ☆ Aircraft Quality materials and finishes ☆ Adaptable to all types of mounting ☆ New Low Unit Cost

APPLICATIONS:
☆ *Instrument service—internal and external*
☆ *Pneumatic gauges* ☆ *Paint sprayers* ☆ *Machine shop use*
☆ *Diaphragm and cylinder air loading*

KENDALL CONTROLS CORPORATION
144 MOODY STREET WALTHAM 54, MASS.

▲ For more details circle NED-53 E3 on enclosed inquiry slip ▲

"SHADE"

Remarkable Vinylite Sheeting that
ABSORBS Heat and Glare

SHADE will never become brittle or crack even in temperatures from —25 to 150 F. All you need is a squeegee, a bucket of water, and some pieces of factory pre-cut SHADE to eliminate glare and heat. Easy to apply, permanent and washable, SHADE is custom cut to fit your windows—Order yours today!

The unfiltered rays of the sun, even on a cloudy day, can be a major cause of fatigue. SHADE is a specially formulated compound to filter light!

NO MORE PAINTING
No need for repeated painting of glass surfaces: with SHADE you have an easily applied filter, *bonded* to the glass. It won't crack or grow brittle.

EASY TO APPLY
Application requires no special skill or tools. It is pre-cut at the factory. Wet, place polished side to glass, squeegee out excess water.

PERMANENT
Following out this procedure will effect a permanent bond. SHADE will never come off until you pry up a corner and strip it off yourself.

WASHABLE
Can be washed like regular glass. If you wish to remove it, a quick washing in warm water will restore its adhesiveness.

COLOR CHOICES
Colors are available in FROSTED TRANSLUCENT, ARCHITECTURAL BLUE, FILTERED WHITE, OLIVE GREEN, TRANSLUCENT GREEN and BLACK-OUT BLACK.

TRANSEAL, Ltd.
Dept. NED, 821 North Ave., Plainfield, N. J.

▲ For more details circle NED-54 E3 on enclosed inquiry slip ▲

Quick as a wink measure both AC and DC

WITH A COLUMBIA TONG TEST AMMETER

(Voltage attachment available)

- Both AC and DC ampere readings are made instantly and accurately without breaking circuit or scraping insulation
- Operated with one hand by merely clamping tongs around conductor
- Cannot burn out
- Scale ranges up to 1000 amperes AC or DC
- Voltage attachment reads up to 600 volts
- Five types to accommodate cables up to 3⅞", bus bars up to 4½"x½"

Write for Tong Test Bulletin ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave., Cleveland 14, Ohio

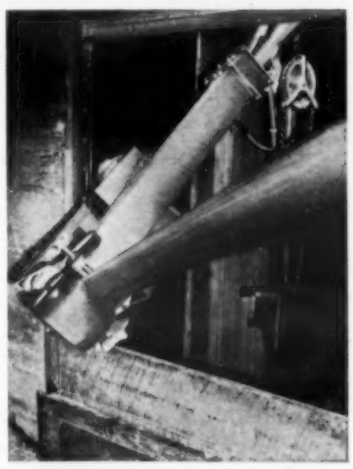
▲ For more details circle NED-55 E3 on enclosed inquiry slip ▲

LIFT TRUCK made in capacities to 10,000 lb

Built with front axle support assembly and fifth wheel of malleable iron, improved Load-Lift truck now uses semisteel multi-ribbed wheels. Fabricated unbreakable rolled steel wheels or Neoprene, cushion rubber and phenolic resin plastic wheels are optional. All are equipped with large bore sealed ball bearings. On a level steel surface plate, a pull of less than 5 lb will start and pull 5000 lb. Other optional equipment includes heavy duty brake on front wheels, heavy duty double ball bearing fifth wheel, special widths, extra high lifts, capacities up to 10,000 lb, swivel casters, auxiliary hinged lifting frames for skids of varying heights and galvanized frame. Made by **Market Forge Co.**, 54 Garvey St., Everett 49, Mass.

▲ For more details circle NED-56 E3 on enclosed inquiry slip ▲

BOX CAR LOADER a centrifugal thrower unit



Box cars can be loaded with all types of granular and small lump bulk material up to 2-in. size by the Hi-Type Swiveloader, a centrifugal thrower unit designed to load over the top of three 20-in. grain doors. Loader unit is mounted on a sloping feed chute which pivots into the car. Operator can load and trim the car without entering it, as he controls throw direction by a chain-operated wheel from the loading dock. Materials can be loaded at rates up to 80 tons per hour. Made by **Stephens-Adamson Mfg. Co.**, 12 Ridgeway Ave., Aurora, Ill.

▲ For more details circle NED-57 E3 on enclosed inquiry slip ▲

DO YOU KNOW? The development and uses of the Microcast process of precision investment casting is theme of 16-mm sound-color motion picture that is available for free showings to engineering and production groups. Complete details on how to obtain this film is presented in 4-page illustrated bulletin "Microcast, A Story of Industrial Progress." You can get a copy from Austenal Laboratories, Inc., Microcast Div., 7001 South Chicago Ave., Chicago 37, Ill.

▲ For more details circle NED-58 E3 on enclosed inquiry slip ▲

The Answer to YOUR HONING PROBLEMS

Here's why they're switching to the
SUPERIOR HONING MACHINE
Model "J"

There IS a difference in honing machines. Superior gives you all the features you want. It's the most versatile and economical bench-type honing machine made. For instance, how many spindle speeds would you like? The Superior gives you infinitely variable speeds from 400 to 1000 r.p.m. AND without changing belts. Talk about ease and speed of changing mandrels and stones—no tools are needed! All stones are ground to size.

With the Superior you can hone over keyways, spline gears and most broken surfaces. How big is it? 13" x 16½" x 25" high. It weighs only 125 pounds.

Use a Superior honing machine. You'll be quick to see its many advantages and you will be satisfied with no other; for after all arguments are exhausted, performance is the test.

Use coupon today for free literature

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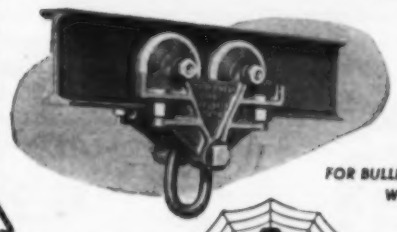
1613 Elreno Street Elkhart, Indiana
Please send free catalog on Superior Honing Machines.

NAME
FIRM
STREET
CITY & STATE
NAME OF SUPPLIER

▲ For more details circle NED-59 E3 on enclosed inquiry slip ▲

hand pushed
TROLLEYS

Webb Hand Pushed Trolleys are sturdily built for long life and minimum maintenance. Hardened steel wheels equipped with retainer type ball bearings assure long wearing properties and ease of operation. Triple labyrinth seals keep lubricant in and dirt out. Side guide rollers effectively eliminate binding and excessive wear, especially when moving loads around curves. For simple, inexpensive and easy handling of materials, use Webb Hand Pushed Trolleys.



P-2530
4" to 10" I-Beam; ½ Ton.

FOR BULLETIN AND PRICES WRITE TO:

JERVIS B. WEBB COMPANY
8921 ALPINE AVE. DETROIT 4, MICH.
OFFICES IN PRINCIPAL CITIES
CONVEYOR ENGINEERS AND MANUFACTURERS

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PENN Mechanical LINAMETER

For corrosive fluids, viscous liquids, pulps, and slurries, for pulsating flows, inadequate straight run of pipe, small flows and wide range of flows.

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Contains capacity tables, installation diagrams, other useful flow data.

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Send for your free copy now

Free booklet helps you cut gummed tape costs

This booklet is filled with helpful tips on saving money with Blue Ribbon Superstandard Gummed Tape. You learn 5 simple steps for faster, less expensive packaging. You see how to apply tape for maximum efficiency. You read case histories of ways that well-known companies slashed their packing costs. Crammed with diagrams, photos. No obligation—send now!

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HUDSON PULP & PAPER CORP., Dept. IN-2 505 Park Ave., New York 22

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Be fresh Stay fresh

wear a DUPOR No. 40

THE RESPIRATOR THAT IS U. S. B. of M. APPROVED FOR TYPE "A" DUSTS

Guards against pneumoconiosis and silicosis producing dusts. Has over 40 sq. in. twin filter area. Sanitary face cloth. Soft rubber face mask. "Controlled-breathing" valves. Wearer has a panorama view with no blind spots. Unusual rubber, felt and plastic construction makes it extra durable, no denting or bending possible. Efficiency remains unimpaired even after rough treatment.

Sample sent $3.00 pp

H. S. COVER
South Bend, Ind.

For more details circle NED-71 E3 on enclosed inquiry slip

CONTROL RELAY
has moisture seal and shielded core

Built-in solenoid release, moisture seal and self-shielded core magnet mechanism are the features of the Sensitrol relay. It is supplied in a variety of ranges with double magnetic contacts, or with single magnetic contacts to make contact on either increasing or decreasing values. Sensitivities of 2 to 0 to 2 microamperes are available, ac and dc voltage ranges can be supplied self-contained up to 500 v. Equipped with a sealed zero corrector, solder terminal connections and a removal bezel for special mountings. Made by **Weston Electrical Instrument Corp.**, 617 Frelinghuysen Ave., Newark 5, N. J.

For more details circle NED-73 E3 on enclosed inquiry slip

WATERMELON TIRE
low pressure suits rough terrain

Rolligon tire is watermelon shaped, uses air pressures between 1½ and 5 psi and permits the vehicle on which it is mounted to operate easily and without

springs over sand and soft ground, or obstructions and rough terrain. Axles do not drive, but serve merely as support for the tire against a set of rollers mounted underneath the chassis. These contact the top surface of the balloon-like structure, driving it and taking the weight at the same time. The design has successfully passed first tests, and is expected to find wide application in industry, military service and agriculture. Made by **Goodyear Tire & Rubber Co.**, 1144 E. Market St., Akron 16, O.

For more details circle NED-74 E3 on enclosed inquiry slip

Electronic Controls

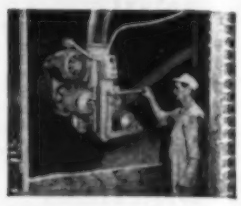
Minneapolis-Honeywell Regulator Co., Brown Instruments Div.—Strip, chart, circular chart and circular scale controllers, plus electric and pneumatic controls for measuring and controlling many process variables are subject of 60-page catalog 1530. Detailed specification and control action descriptions and ratings are featured, together with engineering data on electric control relays.

For more details circle NED-75 E3 on enclosed inquiry slip

ONE Man LOADS and TRIMS Box Cars 40 to 60 T.P.H.

S-A SWIVELOADER

Saves time, money and labor. Powerful centrifugal thrower loads dry, granular material up to 2" size into far corners of box cars. Operator stays safely outside car. May also be used for storage bins or piles.



Write for Bulletin 1046

STEPHEN S-A DAMSON MFG. CO.

Tellevel-Bin Level Controls · SealMaster Ball Bearings
Car Loaders • Car Pullers • Winches • Saco Speed Reducers
12 RIDGEWAY AVENUE, AURORA, ILL.

For more details circle NED-77 E3 on enclosed inquiry slip

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1. CYLINDERS
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Modernair CORPORATION
400 PREDA STREET • SAN LEANDRO, CALIFORNIA

For more details circle NED-78 E3 on enclosed inquiry slip

from receiving to shipping

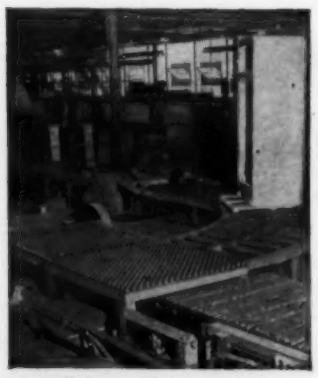
View showing Door Trim and Cabinet Assembly Lines.

12 Buschman CONVEYORS

serve Admiral's refrigerator plant

- Six Apron Conveyors—door and cabinet assembly.
- Two Belt Conveyors—receiving dock to mezzanine storage.
- Elevator Conveyor—from R R cars to storage.
- Belt Conveyor—from assembly to shipping.
- Junction and Down-Ender Conveyor.
- Up-Ender and Shipping Room Conveyor.

Down-Ender Conveyor transfers crated upright refrigerator to horizontal position.



Ball Caster Table is used to turn cabinets on the line.

More refrigerators . . . at lower cost . . . is the overall aim achieved with BUSCHMAN Conveyors at Admiral's Midwest Subsidiary plant. In this plant, as in hundreds of others in every branch of manufacturing BUSCHMAN Engineers have designed time, money and space saving equipment for the handling of materials from receiving through process, assembly and finishing to storage and shipping.

Write for Bulletin No. 60

Representatives in principal cities

PRODUCE MORE . . . FOR LESS
Buschman Conveyors

THE E. W. BUSCHMAN CO.
Spring Grove at Winton Place
Cincinnati 32, Ohio

For more details circle NED-72 E3 on enclosed inquiry slip

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If you have requirements for pressure, temperature, flow, level or electrical measuring instruments, for the products you make or for manufacturing operations, it will pay you to consult with U.S. Gauge, the world's largest manufacturer of accurate instruments.

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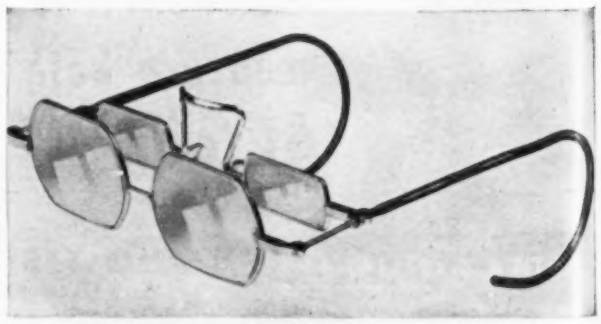
Company _____
Address _____ City _____ State _____

For more details circle NED-76 E3 on enclosed inquiry slip

MAGNIFYING SPECTACLES

Leaves both hands free for inspection!



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Order Direct on 10-Day Trial or Ask your Supplier

ARMCO MERCANTILE CO., Dept. E, 102 N. La Salle St., Chicago 1, Ill.

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S-A Car Pullers

Save Time, Cut Costs

If you have your own switch track, you can use an S-A Car Puller. No need to use a gang of men or wait for a switch engine. *One man can shift or spot up to six loaded cars under normal conditions.* Powerful capstan will also pull or lift other heavy loads at 45 feet per minute.

Write for bulletin 1339

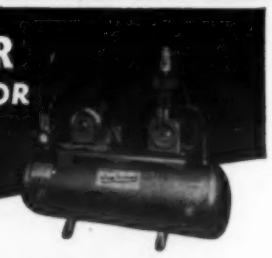
STEPHEN S-A ADAMSON MFG. CO.

Tellevel Bin Level Controls • Car Loaders
SACO Speed Reducers Car Pullers • Winches
SealMaster Ball Bearings

12 Ridgeway Ave., Aurora, Illinois

For more details circle NED-80 E3 on enclosed inquiry slip

IF YOU USE AIR
IN YOUR PRODUCT OR IN YOUR PLANT



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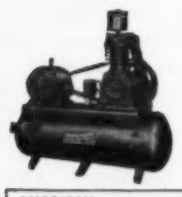
FOR COMPRESSOR PUMPS
Soundly designed, highly efficient. Precision built to deliver more *free air per hp.* Standard units available for pressures up to 200 p.s.i. Single or two stage, one or two cylinders.



FOR COMPLETE AIR COMPRESSORS
Known over 40 years for their efficiency, long life, quiet, economical operation. Available in sizes from ¼ hp through 10 hp. Portable or stationary, skid or tank-mounted, electric motor or gas engine-driven models.

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AMERICAN Brake Shoe COMPANY

KELLOGG-DIVISION
ROCHESTER 9, N. Y.

Kellogg-American

AIR COMPRESSORS PAINT SPRAY EQUIPMENT

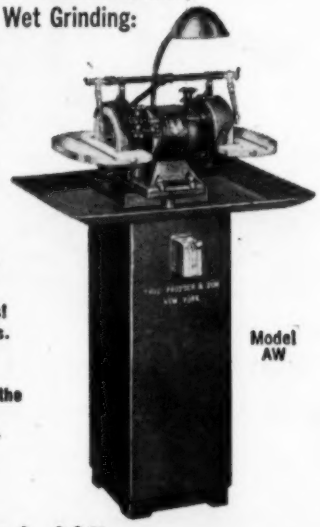
For more details circle NED-81 E3 on enclosed inquiry slip

Now! Grind Carbide Tools Better at Lower Cost!

The New Prosser Carbide Grinder, for Real Wet Grinding:

1. **Saves Diamond Wheels!** Copious flow of water keeps the wheels clean, and reduces loading and grooving.
2. **Saves Carbide Tools!** Wet grinding overcomes heat checks and cracking.
3. **Grinds Faster!** More metal can be removed in a given time with proper wet grinding. (Either diamond or silicon carbide wheels.)
4. **Produces Better Cutting Edges!** Sharp wheels grind sharp tools. Wet grinding keeps wheels clean and sharp.
5. **The Only Real Wet Grinder on the Market at a Moderate Price!** suitable for the average plant. only $397.50

Write for full details



Model AW

THOMAS PROSSER & SON
67 South St., New York 5, N. Y.
Over 100 Years of Service to Industry

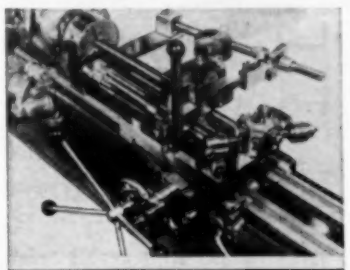
For more details circle NED-82 E3 on enclosed inquiry slip

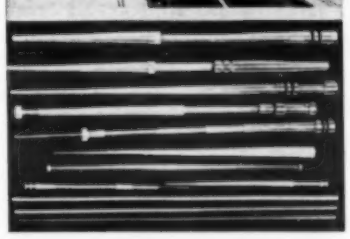
STACKABLE PALLETS for light and bulky loads

Handling of light and bulky loads that do not stack uniformly and loads that will not carry additional weight upon them is possible with Fab-Weld standard stackable pallets. They are supplied to any dimensions and capacities and with a collapsible feature for compactness in dead storage and return shipment. Four-way entry for power fork trucks and two-way entry for hand pallet trucks is standard. Made by **Fab-Weld Corp.**, Salmon & Pickwick Sts., Philadelphia 34, Pa..

For more details circle NED-83 E3 on enclosed inquiry slip

BAR STOCK TURNING MACHINE attachment for lathes produces finishes to 65-microinches rms





Attached readily to any lathe or other machine tool that rotates stock, this Karge Turnomat will turn diameters to within 0.0002-in. and can produce precision turned shapes and tapers. Four sizes are available for maximum bar stock sizes of ¼ to 1¾ in. Minimum diameter that can be handled is 1/32-in.

Bar stock is connecting rotating link between lathe or head stock and the rotating spindle of attachment. Spring collet of attachment grips the stock with just enough friction to rotate the Turnomat spindle about its own precision bearings, and at the same time permits the stock to advance through the collet while turning. Concentricity of cut is assured, since the stock, collet and spindle rotate as a single unit. Because of proximity of cutting tools to the face of the collet, it is possible to make deep plunge cuts without chatter.

Two or three cutting or form tools slide in individual grooves. Optional built-in taper attachment permits turning unlimited tapers and lengths within capacity of machine. Six-position turret attachment makes it possible to perform centering, reaming, tapping and threading operations. Lower half of illustration shows typical shapes that can be produced on individual or production basis. Made by **Turnomat Co.**, Dept. 13, Brockport, N. Y.

For more details circle NED-84 E3 on enclosed inquiry slip

FREE! New Book!

Just off the Press!

New booklet that tells you how to avoid losses in time, equipment and production due to electrical overloads, short circuits, motor failures and electrical fires. Write for your copy now.

MULTI-AMP CORPORATION, HARRISON, NEW JERSEY

For more details circle NED-85 E3 on enclosed inquiry slip

THE NAME THAT SYMBOLIZES

RENFROE THE *Finest* IN *Steel Lifting Clamps*

This Sturdy, Versatile, Safety Snap Lock Clamp meets with all your requirements for...

- Maximum Speed and Safety
- Vertical clamps in 2, 4, 8, 12 and 20-ton capacities
- Lock on in any position
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- The toughest clamp ever built

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1259 WEST STATE STREET • P. O. BOX 4279
JACKSONVILLE, FLORIDA

For more details circle NED-86 E3 on enclosed inquiry slip

Announcing– the new LPD design **Clipper Seal**

an all-purpose oil seal with new long life and a wide range of applications

The new LPD Clipper Seal provides improved sealing efficiency over a wider range of shaft speeds and equipment variables. It is effective under service conditions and temperatures heretofore considered impossible.

It can be used for practically any application with greater assurance of fewer replacements. Because of its lip design, and compounds used, it requires less lubrication over its bearing area, enabling it to last longer and run cooler. The greater flexibility of its lip enables it to perform better, sealing effectively with minimum torque.

Available in a wide range of heel and lip compounds. For further information write Johns-Manville, Box 60, New York 16, N. Y.

Johns-Manville CLIPPER SEALS

For more details circle NED-87 E3 on enclosed inquiry slip

G-S MOTOR-DRIVEN ACID PUMP

For safe flow, faster and in larger volume, up to a 12-foot lift, the G-S Type C Pneumatic Acid Pump is ideal.

Portable, self-contained, electric-driven, compressor automatically prevents pressure from exceeding 15 lbs. Operator holds pressure line to valve body to obtain pumping action. All parts in contact with acid are corrosion-resistant, long-lived.

FREE! Write for 64 page illustrated catalog describing and pricing hundreds of safety products.

Suitable for all standard glass carboys, stainless steel, aluminum and plastic containers. State type of container when ordering.

G-S TYPE C PNEUMATIC ACID PUMP, COMPLETE **$94.50** F.O.B. PHILA.

GENERAL SCIENTIFIC EQUIPMENT CO.
GENERAL SAFETY EQUIPMENT
2701 W. HUNTINGDON ST., PHILADELPHIA 32, PA.
SAFETY EQUIPMENT FOR EVERY HAZARD

For more details circle NED-88 E3 on enclosed inquiry slip

115 million cycles without a breakdown!

Torture Test Proves COMAR RELAYS are Tough

Illustration shows a typical Comar Telephone Type "TM" Relay recently subjected to exhaustive tests by a Comar user. Results: 115 million cycles without a breakdown!

Comar relays stand up under severest operating conditions. They are engineered to far exceed normal performance and circuit requirements. Precision workmanship and top quality is your assurance of dependable operation. Comar specializes in relays custom-engineered to fit your needs. Send specifications for our recommendations, no obligation.

COMAR ELECTRIC COMPANY
3049 Addison St.
Chicago 18, Illinois

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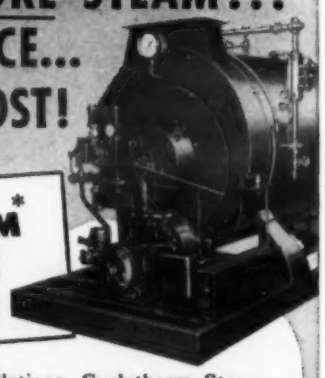
Relays • Transformers • Solenoids
Switches • Coils • Hermetic Sealing

For more details circle NED-89 E3 on enclosed inquiry slip

Produce MORE STEAM... in LESS SPACE... at LOWER COST!

WITH

CYCLOTHERM* CYCLONIC COMBUSTION



● In thousands of installations, Cyclotherm Steam Generators set new standards for performance and economy. Exclusive Cyclotherm flame control produces 66% more power per sq. ft. of heating surface than competitive type boilers and requires only 3 sq. ft. of heating surface per Boiler Horsepower . . . saving up to ⅓ on installation space.

- Guaranteed 80% efficiency
- Complete on arrival. Only 4 easy connections
- Fully automatic controls
- Full power operation in 15 minutes

Cyclotherm Steam Generators are designed for 18 to 500 h.p., 15 to 200 psi operating pressures. Approved—ASME, Nat'l. Board Standards, Underwriters Laboratories, Inc.

*Reg. trade name

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CYCLOTHERM* STEAM GENERATORS
CYCLOTHERM DIVISION UNITED STATES RADIATOR CORP. OSWEGO, NEW YORK

For more details circle NED-90 E3 on enclosed inquiry slip

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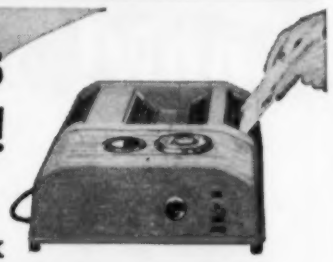
with revolutionary, new SINGLE-UNIT TRANSCOPY DUPLEX



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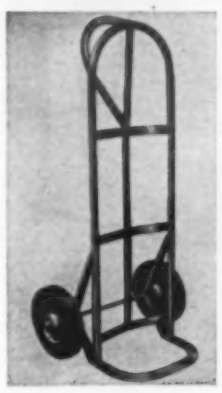
CITY_____ ZONE_____ STATE_____

For more details circle NED-91 E3 on enclosed inquiry slip

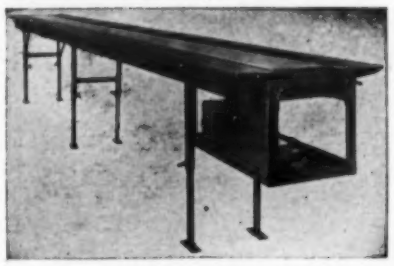
HAND TRUCK has curved handle mounting



Built with a curved handle welded to the frame at both top and bottom, the Rapistan Wheel-Ezy hand truck has a beveled nose that slides under materials easily. Handle is comfortable to grip in any position. Truck, also offered with double handles, has choice of steel, Durastan resinoid or five types of rubber wheels. Capacity is 500 lb. Design prevents wheels from catching under overhang of stair treads. Made by **Rapids-Standard Co.**, Dept. WE, 342 Rapistan Bldg., Grand Rapids 2, Mich.

For more details circle NED-92 E3 on enclosed inquiry slip

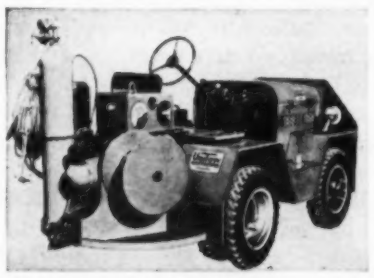
APRON CONVEYORS for use as assembly bench



Extremely rigid apron is available for all Metzgar belt and live roller conveyors for use as benches in assembly or inspection operations. Variable speed drive can be furnished to suit in ratios of 4:1 and speed from 5 fpm up. Belts for special handling requirements are available on all power belt models. Made by **Metzgar Co.**, 416 Douglas St., N.W., Grand Rapids 4, Mich.

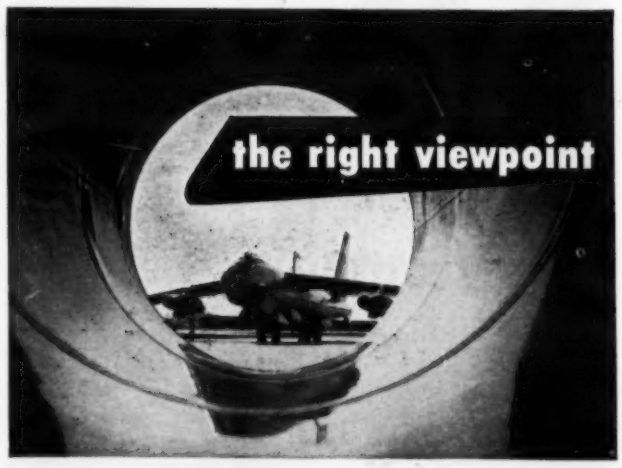
For more details circle NED-93 E3 on enclosed inquiry slip

MOBILE WELDER TRACTOR doubles as towing, pushing unit



All welding equipment, materials and men needed for fast on-the-spot welding anywhere in plant, out in yard, or between buildings are carried to the job by this mobile Unitow welder tractor. International Harvester engine operates both tractor and 300 or 400-amp generator. Direct drive power take-off eliminates belts. Tractor is designed to navigate narrow aisles and low doorways and will double as a towing and pushing tractor or railroad car spotter. It is available with oxy-acetylene tank bracket and handy cable reel. Made by **Hensel Green & Co.**, 7-9 S. Clinton St., Chicago 6, Ill.

For more details circle NED-94 E3 on enclosed inquiry slip



When you're thinking about aluminum or magnesium castings, you need the services of an organization with the right viewpoint.

We're referring, of course, to the right viewpoint toward the best possible use of these two light metals. . . ability to do the job; . . . service; . . . adequate facilities for production; . . . experience.

We here at Wellman like to think we have a combination of all these things . . . trained, interested personnel, three complete foundries and a modern pattern shop, almost a half century of experience in solving casting problems.

Why don't you try us and see how we look from your viewpoint?

- Well-Cast Aluminum and Magnesium Castings
- Well-Made wood and metal patterns

Write today for our New Catalog No. 53

THE WELLMAN BRONZE & ALUMINUM CO.
DEPT. 15, 12800 SHAKER BLVD., CLEVELAND 20, OHIO

For more details circle NED-95 E3 on enclosed inquiry slip

WHAT ARE YOUR MAGNETIC SEPARATOR PROBLEMS?

Remington Rand, Inc., Tabulating Machine Division, Ilion, New York, are one of many manufacturers using Homer Magnetic Separators to cut sorting and handling costs in the processing of ferrous metal parts.

In the operation above, ferrous tabulating machine parts are quickly sorted from abrasive tumbling stones, saving many valuable man hours, and permitting the handling of larger quantities of finished parts. If you have a similar problem—consult us at once—Homer Engineers will be glad to recommend the type of magnetic equipment you need. Bulletins upon request.

Homer **The HOMER MANUFACTURING CO., Inc.**
DEPT. I-25 LIMA, OHIO

Producers of Magnetic Separator Equipment Since 1923

For more details circle NED-96 E3 on enclosed inquiry slip

Do you use barrier wraps?
Then you need the new.

DERBY BW
BARRIER WRAP MEASURING DISPENSERS

The Derby BW Dispensers eliminate the slow, messy, expensive Barrier Wrap handling problem and provide a substantial saving in time, labor and material. Large rolls may be converted into the exact widths and lengths desired in one single operation.

Available in models to accommodate 4", 6", 8", 12" and 14" rolls and equipped with Universal Slitter to deliver a variety of desired widths and definite lengths.

For further information write Dept. NED

DERBY SEALERS, INC. DERBY, CONNECTICUT

For more details circle NED-97 E3 on enclosed inquiry slip

FREE THE MOST COMPLETE BOOK on INDUSTRIAL SIGNALS

tells you how to use Benjamin Sound Signals as the

"20th Century Pony Express"

To Sound The Alarm Against Production Enemies

For your protection against hidden costs . . . production delays . . . stalled machines . . . flood, fire and sabotage hazards . . . 48-page book of photographs, diagrams, charts and descriptions, compiled by sound-signal engineers . . . the basic principles of modern signal practice, explained in down-to-earth, non-technical language . . . over 25 important subjects on the correct planning, selection and use of signals.

For your free SIGNAL GUIDEBOOK send request on company letterhead to: Benjamin Electric Mfg. Co., Dept. W, Des Plaines, Ill.

BENJAMIN *Signal Equipment*

For more details circle NED-98 E3 on enclosed inquiry slip

Control your Sequence Operations Automatically

this far better way

STALEY TIME CYCLE CONTROLLERS

Start and stop motors, open and close relays, valves, etc. automatically in any predetermined cycle of time interval. Adjustable cams operate dependable Staley Metallic Mercury Switches for fully enclosed make and break. Standard, interchangeable parts and accessories provide wide range of adaptability in varying from 1 to 110 circuits. Reliability and long life proved in hundreds of installations.

Example—A two-circuit Staley Time Cycle Controller, used in reversing current several times a minute in a plating bath, has been operating 24 hours a day, 7 days a week for the past 5 years.

If you do things automatically, send for our helpful Bulletin No. 405.

ELECTRIC SWITCH CORPORATION
1250 Ruddick Street, Columbus, Indiana

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OVER 4000 TYPES OF
PRECISION ENGINEERED
DARNELL CASTERS
for light, medium or heavy duty service

Always SWIVEL and ROLL

Free MANUAL

DARNELL CORPORATION, LTD.
DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

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PAGE FENCE -Since 1883

• AMERICA'S FIRST WIRE FENCE •

EVERY STEP IS QUALITY CONTROLLED—FROM RAW METAL TO THE ERECTED FENCE

• Page *Chain Link* Fence, pioneered by PAGE and produced only by PAGE, offers reliable protection against hazards which threaten both property and persons.

YOUR CHOICE OF THREE SUPERIOR METALS is assurance that your fence will best meet your needs. Choose heavily-galvanized Copper Bearing Steel, or long-lasting Stainless Steel, or corrosion-resisting Aluminum. Interlocking wires are woven to form a strong, uniformly square mesh.

EIGHT BASIC STYLES, varied by choice of metals, wire gauges, heights, types of gates, posts and post tops, and top rails. Tension and fabric bands not removable from outside. Gate frames welded at joints.

IT'S TIME TO THINK, AND ACT. Page Fence is expertly erected by technically trained firms conveniently located throughout the country. For illustrated PAGE data and name of nearest firm . . .

Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

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LIFT TRUCKS
3000 and 4000-lb capacities

Small, lightweight model YC-40 truck, one of two new Hyster models, has a lifting capacity of 4000 lb. Model UC-30 is a 3000-lb capacity version of the YC-40. Both have heavy duty industrial engines and cushion type tires. Photo shows the larger capacity truck unloading a box car. Made by **Hyster Co.,** 2906 N. E. Clackamas St., Portland 8, Ore.

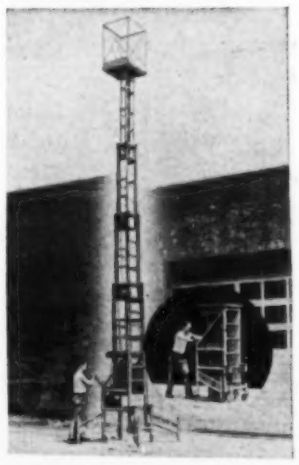
▲ For more details circle NED-102 E3 on enclosed inquiry slip ▲

PORTABLE ALL-PURPOSE TABLE
has self-locking, folding steel legs

Combination truss and trim steel frame chassis of this portable all-purpose table gives it both lightness and strength. Self-locking steel folding legs afford both rigidity and movability. Top can be plywood, plastic, Masonite or linoleum, as specified, and edges are bound with steel. Table will not twist, edge-chip or warp. It can serve variety of uses in factory offices, reception rooms, classrooms and auditoriums. Made by **Takapart Products Co.,** Dept. OE, Babylon Turnpike opp. Grand Ave., Freeport, N. Y.

▲ For more details circle NED-103 E3 on enclosed inquiry slip ▲

PORTABLE SCAFFOLDING
folds to compact easily-handled unit



Removable leg outriggers with leveling screws are used on this Scaf-Fold. Work platform telescopes up and down and also folds in and out. Because unit folds into compact unit it can pass through narrow doors or in and out of elevators and requires minimum of storage space. It is rolled easily to any working location, and can be used for overhead maintenance, construction and assembly operations. Made by **Atlas Industrial Corp.,** 845-ND 39th St., Brooklyn 32, N. Y.

▲ For more details circle NED-104 E3 on enclosed inquiry slip ▲

SEE THEM COMPARE THEM AND YOU'LL BUY 'EM

MADE TO TIRE AND RIM ASSOCIATION STANDARDS

These wheels are another Geneva "FIRST". They are furnished in tire diameters 8", 10", 12", 14", 16, and 18". The wheels are available with choice of hub lengths and bearing types for various spindle sizes, making these interchangeable on your present spindle. They carry great loads easier,—more flotation,—cushioning and longer life.

SEND FOR LITERATURE NOW!

GENEVA METAL WHEEL COMPANY
502 Railroad Street, Geneva, Ohio

Gentlemen:
Please send us literature outlining the superiority of Super Width Rim Disc Wheels.

COMPANY _____
NAME _____
ADDRESS _____

Geneva

"ROLL CHIEF" SUPER WIDTH RIM

DISC WHEEL WITH WIDE TREAD AND CROSS SECTION PNEUMATIC TIRES AND TUBES

GENEVA METAL WHEEL CO.
702 RAILROAD STREET
GENEVA, OHIO, U.S.A.

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with AURAND CLEANING TOOLS

Clean off accumulations of scale, paint, rust or any foreign matter from any hard surface with Aurand Cleaning Tools. Toothed cutting wheels, loose pinioned on rotating head chip away accumulations at high speed. Positive depth shoe prevents cutting into permanent surface and assures uniform cleaning of entire area.

Two sizes in electric or pneumatic models.

For full details, write Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

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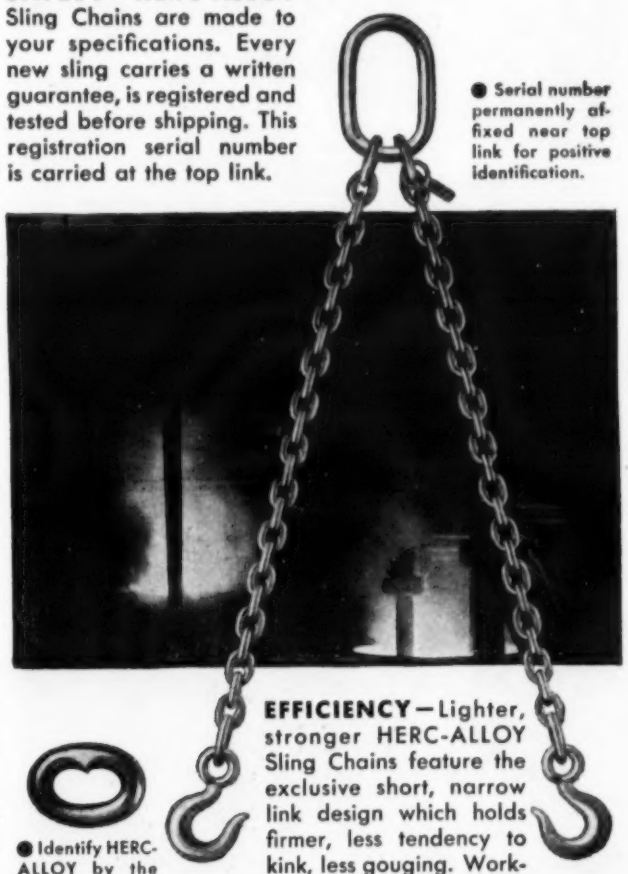
NONE BETTER...
America's First and Safest

HERC-ALLOY
SLING CHAINS

STRENGTH—Size for size, no other sling chain offers a greater tensile strength. HERC-ALLOY will not crystallize—never requires annealing.

SAFETY—HERC-ALLOY Sling Chains are made to your specifications. Every new sling carries a written guarantee, is registered and tested before shipping. This registration serial number is carried at the top link.

● Serial number permanently affixed near top link for positive identification.



● Identify HERC-ALLOY by the patented Inswell side weld with the extra swell of metal on the inside of the link.

EFFICIENCY—Lighter, stronger HERC-ALLOY Sling Chains feature the exclusive short, narrow link design which holds firmer, less tendency to kink, less gouging. Workmen handle HERC-ALLOY with less effort.

PREFERENCE—Men who buy and use sling chains are influenced only by facts learned through experience. HERC-ALLOY Sling Chain preference has been built up over the years, not just by what we say, but by how HERC-ALLOY performs on the job.

Write for Data Book No. 3 which contains much useful manufacturing and application information on HERC-ALLOY Sling Chains.

COLUMBUS McKINNON CHAIN CORPORATION
(Affiliated with Chisholm-Moore Hoist Corp.)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
District Offices: New York • Chicago • Cleveland
Other Factories at Angola, N. Y., Dixon, Ill., St. Catharines, Ont., Can., and Johannesburg, South Africa.
See us at Booth 1526—Philadelphia—May 18-22
5th National Material Handling Exposition

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FOTO-FLO MODEL C
PHOTO-COPYING MACHINE
New! Speedier! More Economical!

DAYLIGHT OPERATION NO DARKROOM REQUIRED

Makes Up to 5 (18" x 24") Prints a Minute of anything written, printed, drawn or photographed

WRITE DEPT. 53-237 for information showing how FOTO-FLO can speed production and lower photo-copying costs.

HALOID THE HALOID COMPANY ROCHESTER 3, NEW YORK
Branch Offices in Principal Cities
Photocopy Papers • Photo-copying Machines • Photographic Papers

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NEW! LEWIS AUTOMATIC TRIGGER ACTION SAFETY KNIFE
Quickly and Successfully Adopted for Use by America's Leading Concerns

No other cutting tool like it. Eliminates the hazards of exposed cutting blades. You must operate it to appreciate its swift and sharp cutting . . . always automatically ready for use. Trigger action gives full blade visibility with safety.

Retail Price $1.50

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

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Line-O-Power
STRAIGHT LINE DRIVES

High quality, compact design incorporating Duti-Rated high hardness precision gears assembled in streamlined housings of rugged cast iron.

Accurate high production machine tools assure low original cost. Simplified construction, direct splash lubrication, quality workmanship assure long wear life. Efficiencies of 96% or higher.

Double and triple reduction—capacities up to 200 h.p., ratios 5 to 1 up to 238 to 1.

FOOTE BROS. GEAR AND MACHINE CORPORATION
Dept. NE, 4545 S. Western Ave.
Chicago 9, Illinois

WRITE for BULLETIN LPB

FOOTE BROS.
Better Power Transmission Through Better Gears

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PORTABLE CONVEYOR
lightweight unit is 20 ft long

Brick, lumber, tile, castings, parts and packages are but a few of the products that can be handled by the model 12-20 Con-Vay-It RB conveyor. Available with either reversing electric gearhead motor or gasoline engine, this belt conveyor is offered in standard 20-ft length. It is lightweight and fully portable. Accessories include waterproof reversing controller, swivel wheels, clamp type elevating mechanism, hand crank type elevator and trough attachment for bulk materials. Made by **American Conveyor Co.**, 1113 W. Adams St., Chicago 7, Ill.

▲ For more details circle NED-111 E3 on enclosed inquiry slip ▲

SCAFFOLDING CASTER
equipped with Oilite wheel bearing

Designed for scaffolding applications with a load capacity of 280 lb per wheel, this industrial caster has an Oilite wheel bearing and Moldon rubber wheel. Also incorporated are double ball bearing races, forced steel yoke and top plates, and lubrication through standard grease fittings. Made by **Midwest Precision Corp.**, 303 Hillsdale St., Jackson, Mich.

▲ For more details circle NED-112 E3 on enclosed inquiry slip ▲

AIR OPERATED HOIST
lifts ½-ton loads at 40 fpm

Of roller chain type and powered by rotary vane motor, this Air Hoist weighs 27½ lb and has 1000-lb capacity at 40 fpm. Throttle control provides infinite range of lifting speed. Safety is assured by top and bottom safety snap hooks; adjustable safety stops on chain to limit lift and descent; and brake which locks instantly when control is released, air is disconnected or air supply fails. Available accessory equipment includes air hose, extra length load chain and control cables, ½-ton trolley, hose trolley and direct mounting. Made by **Aro Equipment Corp.**, Erie St., Bryan, O.

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NEW Corrosion-Resistant
Speedline fittings

LOWER PIPING COSTS result when you use *Speedline* fittings, because you can use lightweight Schedule 5 pipe. Increased ID of Schedule 5 pipe gives lines increased capacity.

RAPID INSTALLATION is possible because the *Speedline* method often eliminates the need for welding or flaring.

Write for your copy of this 20-page *Speedline* catalog. It gives you the entire story.

HORACE T. POTTS CO. *Since 1815*
532 Erie Avenue & D Street, Philadelphia 34, Pa.

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Shredded Paper

IS THE IDEAL PACKING MATERIAL

produce it yourself for . . .

(1) Real dollar & cents savings
(2) Minimum inventories
(3) Substantial space savings
(4) Dependable supply

Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing *today* to:

INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street Salem, Ohio

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This Electrical Reporter Stays on the Tough Jobs Longer...

Added Evidence that

Everyone Can Count on VEEDER-ROOT

Compact and rugged . . . this electrically operated reset counter is specially designed for tough jobs that demand longer counter life.

Here's another instance of the *infinite applicability* of Veeder-Root *Count*rol — electrical, mechanical or manual. And here's another instance, too, of the endless resourcefulness of Veeder-Root engineering, and the ability to design a *complete counting package* that fits the job fully and exactly. Now . . . what's *your* problem?

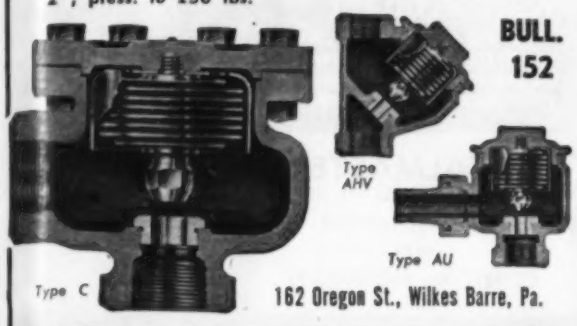
VEEDER-ROOT INCORPORATED
"The Name That Counts"
HARTFORD 2, CONNECTICUT
Chicago 6, Ill. • New York 19, N.Y. • Greenville, S.C.
Montreal 2, Canada • Dundee, Scotland
Offices and Agents in Principal Cities

▲ For more details circle NED-116 E3 on enclosed inquiry slip ▲

Nicholson Steam Traps

CUT THIS HEAT-UP CYCLE 40%

An Eastern processor solved the freeze-up problem on their jacketed kettles by replacing mechanical traps with Nicholson thermostatic units. In addition they found heating time was shortened 40%. Credit is given the higher, more even temperatures which Nicholson traps effect. See why leading plants are increasingly standardizing on Nicholsons for faster heat transfer. 5 types: size ¼" to 2"; press. to 250 lbs.

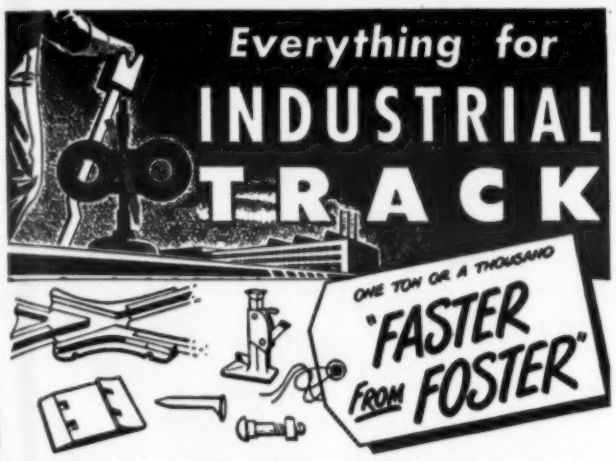


162 Oregon St., Wilkes Barre, Pa.

W. H. NICHOLSON & CO.

TRAPS · VALVES · FLOATS

For more details circle NED-117 E3 on enclosed inquiry slip



Need Rails—Switches—Frogs—Guard Rails or Track Tools? For best selections and prompt deliveries—try FOSTER—shipments of most items can be made from stocks in our five nationwide warehouses.

RAILS—New and Relaying Foster stocks are being replenished daily. Any items we did not have last week, we'll probably have next week. We match specifications and sizes to meet all your requirements on any job, new installations or replacements. *Call on Foster for all your needs for Industrial Track Equipment and Supplies.*

Write for Track Equipment Bulletin NE-5

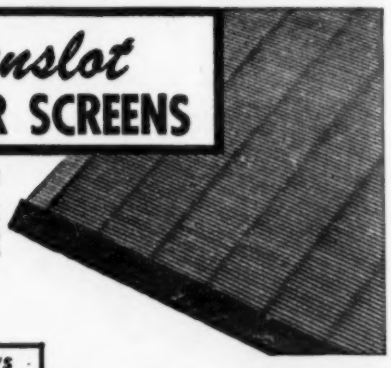
L. B. FOSTER CO.

CHICAGO 4, ILL. HOUSTON 2, TEX.
PITTSBURGH 30, PA. NEW YORK 7, N.Y.

For more details circle NED-118 E3 on enclosed inquiry slip

Kleenslot VIBRATOR SCREENS

They can be DESIGNED AND ADAPTED TO FIT ANY MAKE OF VIBRATOR. Perfect separation on wet or dry screening. Accurate performance on hundreds of installations.



HERE'S HOW IT'S DONE

Cross section at left shows how KLEENSLOT Screens operate on a non-clogging principle.

Kleenslot SCREEN GUARDS

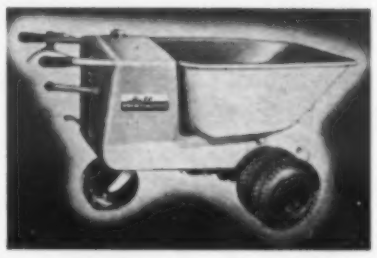
The screen guard is built into the screen and the guard bars permit only the finer particles to pass over the screen. All sizes and most materials furnished.

SEND FOR OUR ILLUSTRATED CATALOG

Wedge-Wire CORPORATION
5804 CLARK AVE. CLEVELAND 2, OHIO

For more details circle NED-119 E3 on enclosed inquiry slip

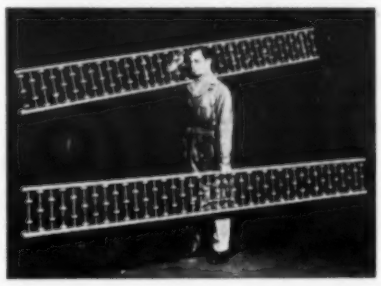
POWER WHEELBARROW accessories provide versatility



Improved model Prime-Mover power wheelbarrow features electric starting and ¾-ton capacity. Capable of traveling indoors or out over smooth surfaces, rough terrain or up 20-degree ramps, this gasoline engine driven materials handling unit is offered with variety of accessories such as two sizes of flatbeds, 10 cu ft dump bucket, snow plow, power sprayer and power take-off. Made by **Prime-Mover Co.**, Third & Oak Sts., Muscatine, Iowa.

For more details circle NED-120 E3 on enclosed inquiry slip

ALUMINUM GRAVITY CONVEYOR lighter and stronger than steel



Aluminum gravity wheel portable conveyor is designed for strength and easy handling, is 33⅓ per cent lighter than steel models of equal capacity. It has 2½ in. x 1 in. channel and rigid bolted construction. Capacity is equal to that of the Speedways steel conveyor, and it is available in the same standard widths. Made by **Speedways Conveyors, Inc.**, 1246 Niagara St., Buffalo 13, N. Y.

For more details circle NED-121 E3 on enclosed inquiry slip

LIFTING DEVICE powered by ½-in. electric drill

Designed for raising racks in freight cars, the Brunette Rack Lifter can also be used to raise machine tools off floors, trucks and cars. It consists of a pulley with pockets or teeth that grip the chain. Operator places shaft end with largest diameter in a hole in the wall, pole or fixed upright, and the small diameter shaft end in a ½-in. or larger heavy duty electric drill. Racks can be raised or lowered at will. Made by **Industrial Bench & Equipment Mfg. Co.**, 98 South St., New Britain, Conn.

For more details circle NED-122 E3 on enclosed inquiry slip

NOW . . . 2 TYPES OF READY-POWER DRIVE

GAS-ELECTRIC DIESEL-ELECTRIC

GAS-ELECTRIC Models are for the tough materials handling jobs . . . DIESEL-ELECTRIC Models master the "impossible" jobs that keep trucks going day and nite, year after year.

CONTINUOUS POWER FOR ALL ELECTRIC TRUCKS

CONTINUOUS-DUTY POWER UNITS

The READY-POWER Co.

3832 Grand River Ave., Detroit 8, Michigan

Manufacturers of Gas and Diesel Engine-Driven Generators and Air Conditioning Units; Gas and Diesel-Electric Power Units for Industrial Trucks

For more details circle NED-123 E3 on enclosed inquiry slip

★ See the STAR OF THE SHOW

HERCO

4 WAY -- Up-Down-Right-Left

COUNTERWEIGHT ACTION DOCKBOARD

VISIT US AT GREATER MATERIALS HANDLING SHOW

PHILADELPHIA — MAY 18-22

BOOTH NO. 328

Earl A. HERMAN Company

412 FULLER AVE., N. E.
GRAND RAPIDS, MICH.

For more details circle NED-124 E3 on enclosed inquiry slip

Standardize on

R&S INDUSTRIAL LIGHTING FIXTURES

...3 Complete Lines meet every safety lighting need!

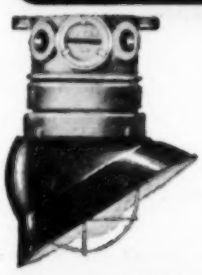
DUST-TIGHT

CLASS II, GROUPS E, F & G AND CLASS III

For hazardous locations where flammable or explosive dusts are present. Streamlined design prevents dangerous accumulation of dust particles. Two exclusive design features facilitate easy cleaning and relamping. Standard pendent and junction box bases accommodate any style of fixture—globe—assembly interchangeably in either 100 Watt or 200 Watt sizes.

WRITE FOR DATA SHEET No. 7151-15

EXPLOSION-PROOF



CLASS I, GROUPS C & D

For greater safety in hazardous locations wherever flammable materials are made or used. A complete line is available in pendent, ceiling, bracket and hand types—from 100 Watts through 500 Watt sizes. Standard conduit bases permit interchangeability of reflector globe assemblies.

WRITE FOR CATALOG No. H-47-15

VAPORTIGHT

For efficient illumination and maximum indoor and outdoor protection against non-inflammable gases, vapors, dusts and moisture. A complete line available in pendent, ceiling and bracket types from 15 Watts through 500 Watt sizes. Bases remain vaportight when globes are removed or broken in service.

WRITE FOR CATALOG No. 9048-15

50 YEARS 1902-1952

R & S also make a complete line of marine fixtures and fittings

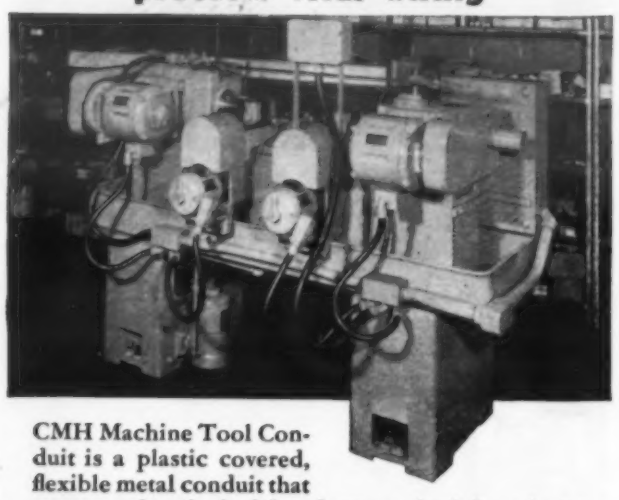
RUSSELL & STOLL COMPANY, INC.
125 BARCLAY STREET, NEW YORK 7, N.Y.

RUSSELL & STOLL

PRECISION-BUILT ELECTRICAL EQUIPMENT—SINCE 1902

For more details circle NED-125 E3 on enclosed inquiry slip

CMH MACHINE TOOL CONDUIT
protects vital wiring



CMH Machine Tool Conduit is a plastic covered, flexible metal conduit that protects electrical wiring from on-the-job moisture and liquids. It is crush-resistant and absorbs machine motion without losing its moisture tightness. Sizes from 3/8" to 2" I.D. Write for bulletin.

CHICAGO METAL HOSE
DIV. FLEXONICS CORPORATION
1343 S. Third Avenue, Maywood, Illinois
Manufacturers of flexible metal hose and conduit, expansion joints, metallic bellows and assemblies of these components.
In Canada: Flexonics Corporation of Canada, Ltd., Brampton, Ontario

CMH

For more details circle NED-126 E3 on enclosed inquiry slip

SPEEDS UP WORK! CUTS DOWN COSTS!

The amazing desk-top **OZAMATIC** makes direct copies of almost anything typed, printed, written or drawn!

No Retyping! No Proof-reading! No Costly Errors!

WITH the amazing new compact OZAMATIC, you simply feed in your original copy of any letter, drawing, or report on ordinary translucent material. In a matter of seconds you have your first copy—*clean, dry* and *ready to use!* Letter-size copies at a rate up to 1,000 an hour . . . at a cost of less than 1½c each.

You'll find many uses for the Ozalid direct copying process entirely self-contained in the desk-top OZAMATIC machine. It makes copies up to 16 inches wide, at speeds up to 30 feet per minute. Larger Ozalid machines accept wider originals, and have even greater capacity. Any girl in your office can learn to operate any Ozalid machine in five minutes.

Write today for free, illustrated literature—or call the Ozalid distributor listed in the classified section of your local phone book.

Cut Copying Costs . . . Use
OZALID

Johnson City, N. Y.
A Division of General Aniline & Film Corporation.
"From Research to Reality."
Ozalid in Canada—Hughes Owens, Ltd., Montreal.

For more details circle NED-127 E3 on enclosed inquiry slip

SLAT CONVEYOR
handles heavy, bulky products

Pusher type slat conveyor moves hot billets and other heavy, bulky products by bars that are clamped to the pair of power driven chains that travel in the conveyor frame side rails. Bars, located at 48-in. centers, push material over a stationary full width roller bed. Rollers have lifetime lubricated bearings and are held in position by a spring lock which provides quick assembly and disassembly. Slat conveyors are available in wide range of widths and frame pitches. Made by **Sage Equipment Co.**, 28 Essex St., Buffalo 13, N. Y.

For more details circle NED-128 E3 on enclosed inquiry slip

PRINTED RECORDING CHARTS
circular and strip types available

Printed recording charts, in circular types up to 18 in. diameter and strip types up to 29⅝ in. wide are now available, made to order for all types of computors, research and special instruments. Charts can be made on special papers, such as wax coated, heat sensitive, chemically coated, smoke covered and electrically sensitive types. Now being produced by **Bristol Co.**, 30 Bristol Rd., Waterbury 20, Conn.

For more details circle NED-129 E3 on enclosed inquiry slip

TUBULAR SCAFFOLDING
has only two basic parts

Slip-fit design of frame and tie-bar, the only two basic parts of Jagiel Kiwk-Skaf tubular steel scaffolding, eliminates need for fastening devices and minimizes time and labor required for erection. On one job, a platform 4 ft high and 182 ft long was erected in 98 minutes. Compact design simplifies stacking and transportation. Made by Sharon Steel Corp., Brainard Steel Div., and distributed by **Jagiel Mfg. Co.**, Dept. NED, 415 Madison Ave., Toledo, O.

For more details circle NED-130 E3 on enclosed inquiry slip

Another FLASH-O-LENS at work ...checking soundness of welds at INTERNATIONAL HARVESTER

By *lighting* and *magnifying* welded parts with FLASH-O-LENS, International Harvester Company's Memphis Plant guards against the most minute cracks in the welds.

FLASH-O-LENS offers a quick, simple way of detecting defects—of maintaining product quality. Built-in bulb brightly illuminates the inspection area—accurately ground lenses give sharp, detailed enlargement.

Battery and plug-in models from $10.65. Write for free literature on applications, types, prices.

E. W. PIKE & COMPANY
492 NORTH AVENUE ELIZABETH 3, N. J.

For more details circle NED-131 E3 on enclosed inquiry slip

METAL DISINTEGRATION!
by THOMAS METALMASTER

TOOL STEEL CUTTING · TOOL & DIE REPAIRS · TAP REMOVAL · DRILL PULLING

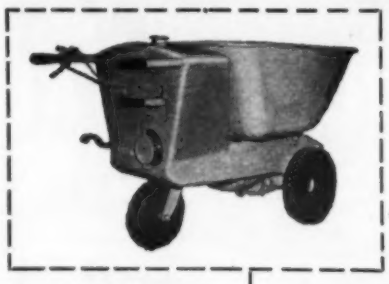
WRITE TODAY!
There's a technical engineer in your area that'll give an on the spot demonstration in your plant at your convenience.

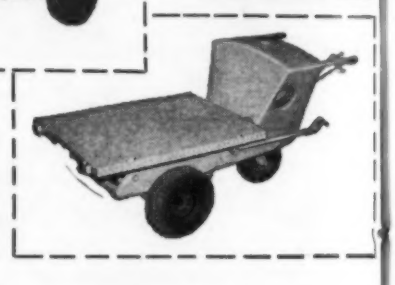
METALMASTER
DIVISION OF THE CLINTON MACHINE COMPANY
CLINTON, MICHIGAN

For further technical information relative to the famous Thomas Metalmaster Disintegrators write to the main office listed above and prompt service will be given your inquiry.

For more details circle NED-132 E3 on enclosed inquiry slip

BULK HANDLING WITH Bell PRIME-MOVER





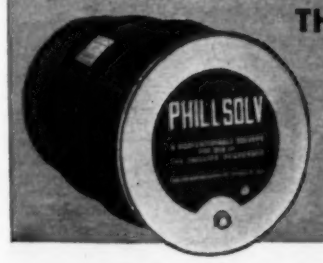
Bucket and Platform interchangeable in a jiffy. Handle up to ¾ ton load — up grades and down — through narrow aisles and doorways.

MOVE your materials — bulk or packaged — with equipment not limited to specific jobs—consolidate those intermittent handling jobs, outdoors or in confined areas—supplement and relieve your specialized equipment and complete the mechanization of your materials handling.

If you're processing bulk materials—disposing of waste and scrap—using materials in maintenance or construction—shifting heavy maintenance equipment—maintaining grounds—or loading, unloading bulk or packaged goods from cars, toss your problems on the Prime-Mover and get the job done—quickly and economically. Prime-Mover Co., Muscatine, Iowa.

For more details circle NED-133 E3 on enclosed inquiry slip

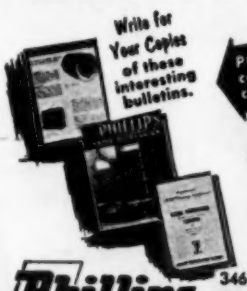
PHILLSOLV
THE ONE DEGREASING SOLVENT THAT GIVES YOU



- More thorough cleaning
- More degreased parts per gallon
- Lower cost per unit cleaned

PHILLSOLV puts real efficiency into your degreasing. Phillsolv's heavier vapors, greater solvency and higher vapor temperatures clean better, work faster, go farther than other solvents. More solvent condenses on each part for more thorough degreasing. Phillsolv's higher temperatures dispel moisture preventing rust and pitting. These factors add up to higher production, lower cost to you.

Use Phillsolv for the most efficient vapor degreasing available.



Write for Your Copies of these interesting bulletins.

PHILLSOLV BULLETIN giving complete details on physical and chemical properties of Phillsolv.

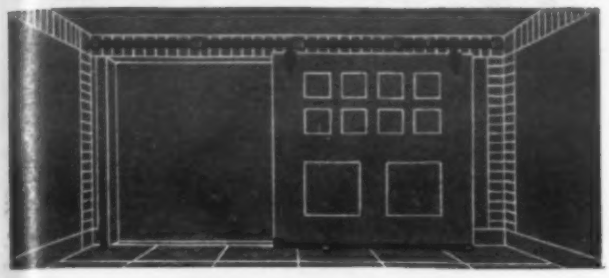
COMPLETE INFORMATION on the Phillips line of electric vapor degreasers.

DEGREASING HANDBOOK gives questions and answers on degreasing processes and problems.

Phillips 3463 Touhy Avenue Chicago 45, Illinois
MANUFACTURING COMPANY
ENGINEERED METAL CLEANING EQUIPMENT

For more details circle NED-134 E3 on enclosed inquiry slip

COBURN
SLIDING DOOR HARDWARE



- . . . LOW INSTALLATION COST
- . . . SMOOTH, EASY OPERATION
- . . . LONG, TROUBLE-FREE LIFE
- . . . ADAPTABLE FOR BOTH NEW AND REMODELING JOBS

Sliding door hardware for industrial applications of all types: Straight-sliding, sliding-folding, around-the-corner, roundhouse and fire doors.

For additional information write to Sales & Engineering, 56 Sterling St., Clinton, Mass. or consult your classified telephone directory.

THE COLORADO FUEL & IRON CORPORATION—Denver, Colorado
THE CALIFORNIA WIRE CLOTH CORPORATION—Oakland, California
WICKWIRE SPENCER STEEL DIVISION—Clinton, Massachusetts

COBURN PRODUCTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL & IRON CORPORATION

For more details circle NED-135 E3 on enclosed inquiry slip

Small precision metal parts... Torrington makes them better, and for less!

FREE CATALOG — shows the great variety of small parts we can produce inexpensively and promptly. Send for copy today!

If your product uses small precision metal parts . . . pivots, pins, dowels, rollers, mandrels, needles, punches, etc. . . . send us your blueprints for a prompt quotation.

As a leading contract fabricator, TORRINGTON is equipped with the special machinery to produce in any quantity for quick delivery at low prices.

THE TORRINGTON COMPANY
Specialties Division
420 Field Street • Torrington, Conn.

Makers of
TORRINGTON NEEDLE BEARINGS

For more details circle NED-136 E3 on enclosed inquiry slip

TOOL of a THOUSAND USES

TRI-SAW, All-Purpose, Portable Power Hacksaw

Still the same low price. ONLY $37.50

Makes Any Cutting Job Quick . . . Easy . . . Economical

Simply attach Tri-Saw to any 1/4" or 5/16" heavy duty drill—then zip through wood, sheet metal, heavy metal, nails, pipe and what have you, in seconds! Use this sensational time and work saving tool and you'll say it's the best all-purpose saw on the market. Only Tri-Saw gives you these exceptional features:

- No side torque or spin
- One shot lubrication
- Completely replaceable high speed bearings
- Improved dirt seal
- Needs no starting hole

ATTENTION JOBBERS AND DEALERS . . . Profitable opportunities for aggressive distributors. Write for details.

Send for free descriptive circular

MANUFACTURED BY
TRI-SAW CORPORATION
2207 HANLEY INDUSTRIAL COURT • ST. LOUIS 17, MISSOURI

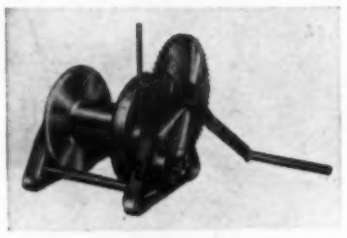
For more details circle NED-137 E3 on enclosed inquiry slip

LIFT TRUCKS
have freelift feature

Maximum fork lift height without increasing collapsed height is permitted by freelift feature incorporated in series FLW HiDuty lift trucks. Other standard features are dual lever controls and Waukesha industrial engines of four-cylinder liquid cooled type. Four models in this series use the Hydroflex clutch. Made by **Transitier Truck Co.,** 2475 N. W. 23rd Ave., Portland 10, Oreg.

For more details circle NED-138 E3 on enclosed inquiry slip

MECHANICAL HAND WINCH
10,000-lb low gear load capacity



Portable, mechanical Handiwinch features low-gear load capacity of 10,000 lb at 27:1 reduction and high-gear capacity of 1900 lb at 4.5:1 reduction. Other features include finger pressure control, self-operating ratchet ring and spring-loaded dog for jamproof operation of brake. Crank can be left in gear, and at minimum radius provides flywheel action in lowering loads. Winch can be powered with 1-in. Skildrill or similar power source, enabling operator to handle 1000-lb loads at 10 fpm. Made by **St. Anthony Machine Products Co.,** Dept. KP, 2424 E. Franklin Ave., Minneapolis 6, Minn.

For more details circle NED-139 E3 on enclosed inquiry slip

SWIVEL CASTER
bearing assembly carries loads

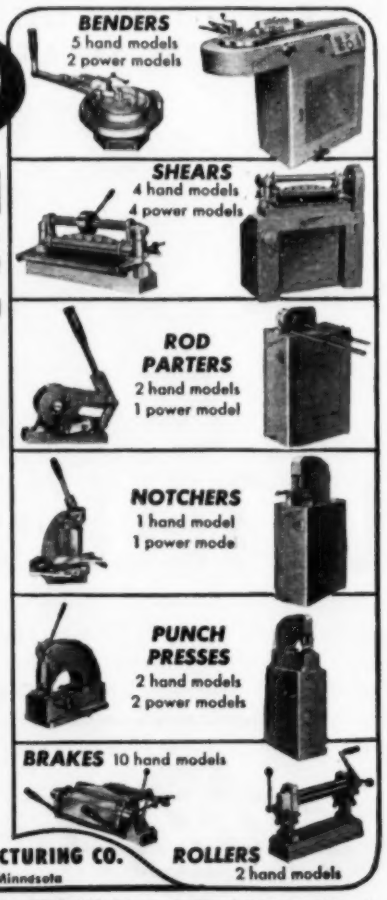
Both radial and thrust loads are carried by a swivel plate floating within a bearing assembly of this king bolt-less swivel caster. Advantages of design include good swiveling action under heavy loads, reduced maintenance, long life and resistance to shock. Swivel is sealed against entry of water and foreign matter by a seal that acts as a grease retainer. Made by **Lansing Co.,** Dept. DEN, 603 N. Cedar St., Lansing 3, Mich.

For more details circle NED-140 E3 on enclosed inquiry slip

di-acro
PRECISION MACHINES
for Die-less Duplicating

NEW CATALOG
packed with ideas for making parts by "Die-less Duplicating"—the money-saving, time-saving technique Di-acro created.

BENDING MANUAL
gives exact methods for bending processes in a variety of materials. Over 90 diagrams and charts with tooling suggestions.



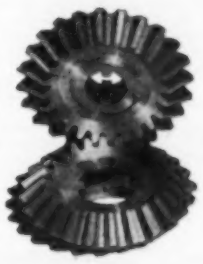
Sent on Request
O'NEIL-IRWIN MANUFACTURING CO.
320 8th Ave., Lake City, Minnesota

For more details circle NED-141 E3 on enclosed inquiry slip

D.O.James
Established 1888

GEARS For INDUSTRY

SINCE 1888 . . . We have been making many types and sizes of gears for industry. Vast plant facilities of the most modern gear cutting equipment assure capable handling of your *production* or *special* gear requirements.



HELICAL and BEVEL GEARS—From 1" to 60" in diameter and from 24 DP to 1½ DP.
SPUR GEARS—Size range from ¾" to 150" in diameter. 32 DP to ¾ DP.
HERRINGBONE GEARS—Made from 1" to 60" in diameter and from 10 DP to 1½ DP.
SPIRAL BEVEL GEARS—Made from 1" to 30" in diam. and 24 DP to 1½ DP.
WORM GEARS—Made from 1" to 100" in diam. and from 24 DP to 1 DP.

YOUR GEAR INQUIRIES WILL RECEIVE IMMEDIATE ATTENTION
D.O.JAMES GEAR MANUFACTURING COMPANY
1140 W. MONROE ST. • CHICAGO 7, ILL.

For more details circle NED-142 E3 on enclosed inquiry slip

MACLEOD
ABRASIVE BLAST EQUIPMENT

Macleod manufactures a complete line of abrasive blast cleaning equipment including machines, rooms and cabinets in a wide range of sizes and capacities as well as dust arresters and blast cleaning accessories. Descriptive literature is available on request.

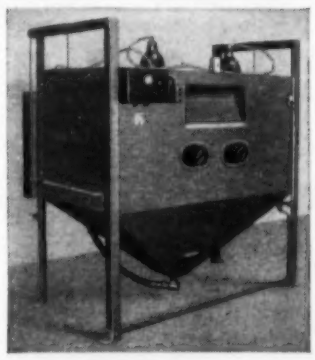
BLAST CLEANING MACHINES

STATIONARY MACHINES

PORTABLE MACHINES

Macleod blast cleaning machines are available in a wide range of types and capacities—in manually operated, semi-automatic, and fully automatic models.

BLAST CLEANING CABINETS



Available in a range of standard types and sizes from small bench type cabinets to large floor installations. The Macleod Engineering Department will also design special cabinets to meet your particular blast cleaning operations.

BLACKING SWAB SPRAYERS

These sprayers have been especially designed for foundry use. They work on the suction principle and require compressed air to operate. They spray liquid facing on dry sand molds, or oil on dry sand cores—penetrating into the pores of the sand and into the pockets and corners which would be missed with the ordinary swab. Available in steel, brass and copper, and in four sizes—1 to 5 quart capacities. For descriptive literature write Dept. N.

The MACLEOD Company
BOX 452, SHARONVILLE, OHIO ESTABLISHED 1897

For more details circle NED-143 E3 on enclosed inquiry slip

Chicago RIVET "912"
AUTOMATIC RIVET SETTER
CUTS COSTS 3 WAYS

1 FASTENS FASTER . . . Only the speed of the operator limits the 912's riveting speed. Completely automatic. A push on the foot pedal automatically feeds, inserts and clinches the rivet.

2 DOES WORK OF SEVERAL MACHINES Quick change rotary hopper and raceway makes the 912 adjustable in 5 to 10 minutes to set different size rivets. Adjustable anvil height and 12-inch throat provide further versatility.

3 SAVES ON MAINTENANCE . . . The 912 is massively built to stand the shocks of constant use and is designed for quick, easy servicing and parts replacement.

If your assembly calls for 3/16" steel tubular rivets or smaller, of 15/16" lengths or less, ask us to show you how the 912 can cut your fastening costs. Send a sample of your problem assembly (or blueprint) for a free fastening analysis.

FREE CATALOG
contains valuable engineering information and rivet specifications plus illustrated descriptions of 26 Chicago Automatic Rivet Setters.

Chicago Rivet & MACHINE CO.
9606 West Jackson Boulevard, Bellwood (Chicago Suburb) Illinois
Branch Factory: Tyrone, Pa.

▲ For more details circle NED-144 E3 on enclosed inquiry slip ▲

Through modern design . . .
WORK BENCHES
at savings of up to 40%

and better quality, too!

New Sturdi-Bilt exclusive patented "Tension Bolting" revolutionizes work bench construction! Assures rigid, vibration-free frames, economical shipping, mass production and low cost. New type Sturdi-Bilt tops are warp and splinter-proof, dent and abrasion resistant, have twice the hardness of hardwoods, adjustable legs. Available with or without drawers in four sizes. For full details, specifications, prices, write for special Bulletin No. 328.

USED AND APPROVED BY LEADING COMPANIES
Both Sturdi-Bilt work benches and the Shop Tender are being ordered and re-ordered in ever-increasing quantities by the Blue Book of American industry.

Versatile "Shop Tender"

As Tool Tender for machine units — For Maintenance or Repair Work — For Laboratory or Mailing Room

Here's the perfect all 'round auxiliary bench. Mobile, convenient, sturdy, low cost—saves hundreds of steps; speeds up work and production. Adjusts to nine different heights. Has handy tool tray and steel drawer. Lower drawer and top frame are "Tension Bolted" for permanent rigidity. Available with wood top (24" x 24" x 1⅝") with drop sides and back—or steel trays; 3" diameter hard rubber wheel sets or caster sets. Choice of 12 models. For full details, specifications, prices, write for special Bulletin No. 328-B.

Sturdi-Bilt
Steel Products, Inc.
624 S. MICHIGAN AVE. • CHICAGO 5, ILLINOIS

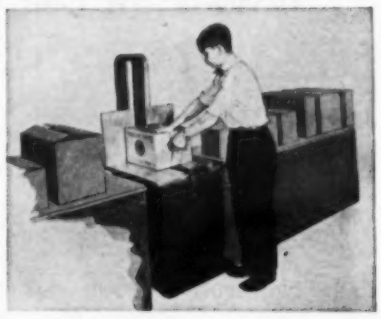
▲ For more details circle NED-145 E3 on enclosed inquiry slip ▲

BAR STOCK RACKS
with capacities to 10,000 lb

Bar stock, pipe and other mill length materials in loose form or in bundles can be efficiently handled by these bar stock handling racks. Built in capacities up to 10,000 lb, racks can be arranged for handling with a Heppenstall automatic one-man rack tong, with power fork trucks or with wire slings and overhead crane, or a combination of all of these handling methods. Construction is of structural and formed sections. Made by **Fab-Weld Corp.**, Salmon & Pickwick Sts., Philadelphia 34, Pa.

▲ For more details circle NED-146 E3 on enclosed inquiry slip ▲

CARTON SEALER
handles any size up to 30 x 30 in.



No adjustment for different size boxes is required by this carton sealing machine whose maximum capacity is a 200-lb carton measuring up to 30 x 30 in. Tape up to 3-in. wide can be placed accurately in any position on carton, and adapter is available for use when taping is required only on carton top. Pressure-sensitive and other tapes can be used. Unit has ¼-hp motor which operates on 110-v single-phase ac. Made by **Whiting Products Co.**, Box 1-A, 1000 Mill St., Camden, S. C.

▲ For more details circle NED-147 E3 on enclosed inquiry slip ▲

WAREHOUSE TRAILER
has exceptionally low deck

Loading and hauling of heavy crates, boxes, machinery and barrels are facilitated by design of this No. 395 Lo-Deck trailer which has 8-in. high deck. Au-

tomatic couplers are at standard height so that it can be used in standard trailer trains. Load capacity is 6000 lb and deck size is 36 x 72 in. Wheels with 6-in. diameter and 3½-in. wide treads roll easily. Made by **Thomas Truck & Caster Co.**, 3330 Mississippi River, Keokuk, Iowa.

▲ For more details circle NED-148 E3 on enclosed inquiry slip ▲

STRAIGHTEN COIL STOCK
FOR PRESSES, SHEARS OR SLITTERS

WITH
LITTELL Variable Speed STRAIGHTENING MACHINES

Output rises, costs drop when coil stock is fed to the press, the shear, or the slitter through a Littell Straightening Machine. Coil stock comes out of a Littell Straightener flat, with curvature removed. Equipped with variable speed transmissions, Littell Straighteners are easily adjusted to meet a wide range of speed requirements. Thirteen medium and heavy duty models straighten coil stock of all standard widths and thickness.

F. J. LITTELL MACHINE CO.
Speed with Safety
ROLL FEEDS • DIAL FEEDS
STRAIGHTENING MACHINES
REELS • AIR BLAST VALVES
District Offices: Detroit, Cleveland
N. RAVENSWOOD AVE., CHICAGO 13, ILL.

▲ For more details circle NED-149 E3 on enclosed inquiry slip ▲

Now-
83% guaranteed minimum efficiency with No. 6 oil
ANOTHER Powermaster® "FIRST"

Compare ASME tests on *Powermaster* with those of any other boiler. You'll see why the automatic *Powermaster* with VORIFLOW combustion is your best buy in packaged boilers. *Powermaster* efficiency actually *increases* at less than full load (which is normal field operation). Start cutting your steam costs today by getting full information on the installation, operating, and maintenance economics of *Powermaster*—15 to 500 HP units for steam generation to 250 psi, and hot water to 30 psi. ASME Code construction. Approved by Underwriters' Laboratories.

Write Now to:
ORR & SEMBOWER, INC.
930 Morgantown Road, Reading, Pa.
BUILDERS OF COST-SAVING BOILERS SINCE 1885

▲ For more details circle NED-150 E3 on enclosed inquiry slip ▲

LARGEST SELLING CUTTERS
FOR TOUGH DIE STEELS!

Specify T-J FOR MORE WORK BETWEEN GRINDS

In die and forge shops everywhere . . . T-J Die Sinking Milling Cutters are today's top favorites . . . because they're "tops" for cutting tough die steels! T-J Cutters hold a sharp edge longer on job after job . . . less breakage! Made from an extremely high grade steel . . . properly machined . . . scientifically heat-treated and accurately ground. Wide range of styles and sizes. Send for new catalog 150. The Tomkins-Johnson Co., Jackson, Mich.

FOR TOUGH JOBS SPECIFY T-J
TOMKINS-JOHNSON
RIVETERS . AIR AND HYDRAULIC CYLINDERS . CUTTERS . CLINCHERS

▲ For more details circle NED-151 E3 on enclosed inquiry slip ▲

BECKER CO_2-POWERED SPRAY GUN
NO COMPRESSOR • NO HOSES
NO ELECTRICAL OUTLETS

USE IT ANYWHERE!

Here's a completely portable sprayer especially designed for the hundreds of industrial uses where costly, cumbersome compressor-type spraying is unnecessary. Sprays paints, oils, varnishes, water-proofing, fire-proofing, etc. Powerful CO_2 cartridge sprays up to one 21 oz. containerful at high pressure. Light in weight for easier spraying. Has brass and stainless inserts, heavy-gauge steel container, comfortable knurled handle grip, and cast aluminum head.

SEE YOUR DISTRIBUTOR or order direct postpaid. Extra CO_2 cartridges at your dealer's or 10 for $1 postpaid.

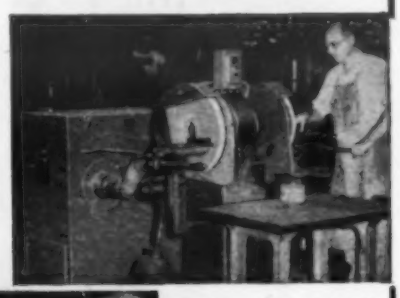
SULLIVAN-BECKER CO., Dept. 173-E, Kenosha, Wis.

▲ For more details circle NED-152 E3 on enclosed inquiry slip ▲

STOP DUST
INSTANTLY WITH **DUSTKOP**

300 cfm to 10,000 cfm standard pre-tested units available in stock

- LOW COST
- IMMEDIATE INSTALLATION
- SAVES HEAT
- PORTABLE



2405 ◀ cfm 1400▲ cfm

DUSTKOP

WRITE FOR

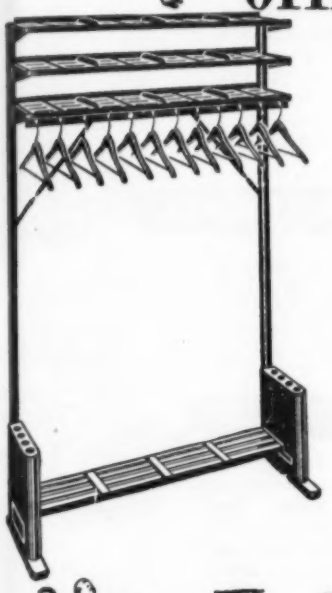
- RECOMMENDATION *about your dust problem. No obligation*
- CATALOG 605-2

AGET-DETROIT CO.

202 S. Main St. Ann Arbor, Mich.

▲ For more details circle NED-153 E3 on enclosed inquiry slip ▲

The OFFICE VALET



Reduce Absenteeism —keep employees' wraps dry, aired, and in press

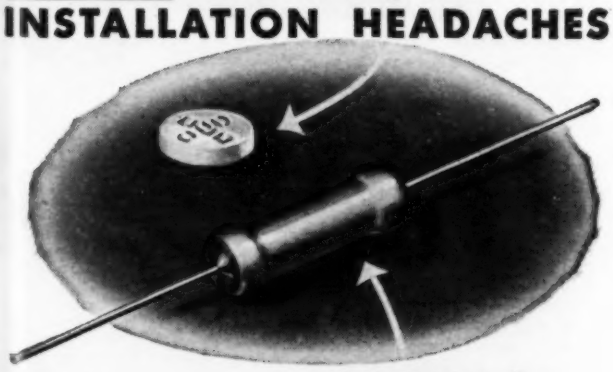
With Office Valet wardrobe equipment employees do not face weather in damp-clothing that has been crumpled in lockers, do not eat soggy lunches soaked by wet hats or mittens. The 4 foot 3-U rack, illustrated, accommodates 12 employees with spaced coat hangers, individual hat spaces, umbrella racks and overshoe shelf. Other units with or without lock boxes, in sizes and capacities for every office and factory need.

WRITE FOR BULLETIN OV-8

VOGEL-PETERSON CO.
1121 West 37th St. • Chicago 9, Ill.

▲ For more details circle NED-154 E3 on enclosed inquiry slip ▲

SECOND best thing for INSTALLATION HEADACHES



Here's the FIRST!

THE small size of *Axiohm resistors* simplifies installation in radio, electronic and related equipment. These rugged miniature Vitrohm resistors are designed specifically for easy installation in circuits used in highly compact equipment. They are mounted without lugs, bolts or brackets on their own wire leads which are hot tin-dipped for ease of soldering. They are available in the following ratings and sizes:

5 watts, 1 to 10,000 ohms, 1" long • 10 watts, 1 to 50,000 ohms, 1¾" long
or custom built to your specifications

Write for Ward Leonard Catalog 15. 51 South St., Mt. Vernon, N. Y.

WARD LEONARD ELECTRIC CO.
Result-Engineered Controls Since 1892
RHEOSTATS • RELAYS • MOTOR CONTROLS • CHROMASTER

▲ For more details circle NED-155 E3 on enclosed inquiry slip ▲

SMALL TRACTOR ATTACHMENTS convert basic unit to higher uses

Model 728 Snow Thrower tractor can be given year-around utility by a line of attachments. Snow throwing unit can be removed easily to provide a tractor with transmission that has three forward speeds and reverse. A three-gang 72-in. mower, 37-in. rotary mower, 700-lb lawn roller, 42-in. dozer blade, sulky and ½-ton dump trailer can be used with the 7.5 hp tractor. Made by **Maxim Silencer Co.**, Dept. TWB, 85 Homestead Ave., Hartford 1, Conn.

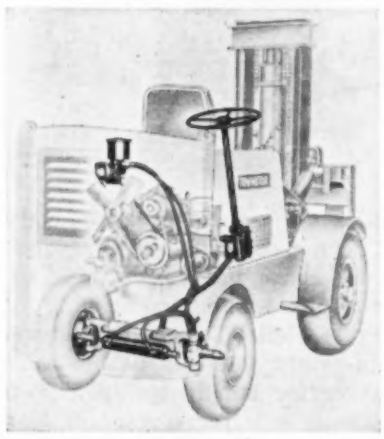
▲ For more details circle NED-156 E3 on enclosed inquiry slip ▲

ROSIN CORE SOLDER is active yet noncorrosive

High spreading quality is feature of RTS 200 rosin core solder which is active yet noncorrosive. Solder is fast to pierce retarding agents such as oxide films and corrosion products on parts being soldered and does not slow down operations. Tested under high humidity conditions of military specification MIL-S-6872, solder showed no harmful corrosion residue. Flux remains active even after standing for long periods. Made of nontoxic chemicals, solder is available in wide variety of wire sizes. Made by **American Smelting & Refining Co.**, Federated Metals Div., Dept. NED, 120 Broadway, New York 5, N. Y.

▲ For more details circle NED-157 E3 on enclosed inquiry slip ▲

POWER STEERING for line of fork lift trucks



Operating efficiency is improved by power steering, now available on the Towmotor line of fork lift trucks. It permits quick and easy turning of pneumatic and solid-tired trucks at low speeds. Full turn of wheels from sharp left to sharp right can be made in 5 seconds with an 80 per cent reduction in steering effort. This feature, coupled with reduced road shock, minimizes operator fatigue and lessens wear on steering gear and drag link. Developed by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

▲ For more details circle NED-158 E3 on enclosed inquiry slip ▲

no tie rods . . . no bulky end caps . . .

O-M CYLINDERS

FIT where others won't!

In close quarters, an O-M Cylinder really shines because it's ALL CYLINDER! The *interlocking mechanism,* which does away with tie rods and projecting end caps, means that *more power is packed into less space.* Saves up to ⅓ installation space. Provides perfect alignment, friction-free performance. Easier to install and repack. End plugs tapped for universal mounting . . . with a complete range of mounting brackets, interchangeable bore for bore.

Available in full range of sizes (1½" to 8" bores), with standard, 2 to 1 or oversize rods. All machined steel, with bearing bronze (no castings). Completely interchangeable parts. 14-DAY DELIVERY ON MOST SIZES.

Send now for FREE catalog and complete set of ½ and ¼-scale templates showing all cylinders and mounting brackets.

FREE CATALOG and Templates

ORTMAN-MILLER MACHINE CO.
1222 150th St. Hammond, Indiana

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SAMSON ANGLE BENDER
with quick grip clamping device

Hardened steel replaceable jaws • Stop gauge for setting angles • Quick adjustment for thickness • Fast • Accurate • Easy to operate

IMMEDIATE SHIPMENT

Write for catalog of Metal Working Equipment

Prices F.O.B. New York Subject to Change

Specifications	Model No. 1 $74.60	Model No. 2 $127.00
BENDS FLATS	3"x3/16"	4"x¼"
BENDS ROUNDS OR SQUARES	⅛"	⅜"
BENDS ANGLES	2½"x2½"x¼"	3"x3"x¼"
NET WEIGHT	73 lbs.	150 lbs.

JULIUS BLUM & CO., Inc.
Established 1910
536 West 22nd St., New York 11 • WAtkins 9-7042

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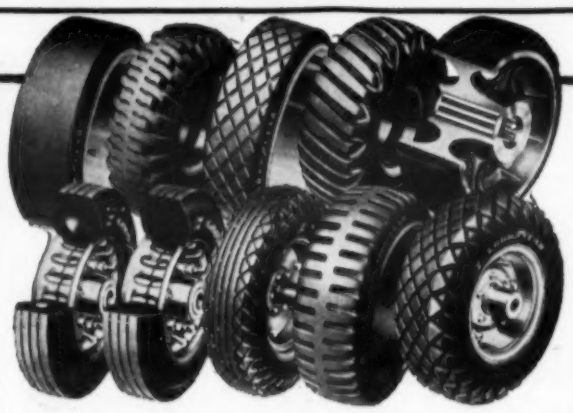

Best way to

CUT TIRE COSTS

Get longer service with less trouble—specify the right tire for each specific job!

Goodyear never has to sell you a makeshift—because Goodyear builds a *complete* Industrial Tire line—each unit in it designed *expressly* to do its specific jobs superlatively well.

That's why you'll save money—year in, year out—specifying GOODYEAR in exactly the type tread and size that's best to meet *your* problems.

FREE
Technical Engineering Advice and Service

To help you solve your particular Industrial Tire problems, Goodyear maintains a staff of fully qualified technical experts. For their free recommendations, write:
Goodyear, Industrial Tire Sales, Akron 16, Ohio

GOODYEAR
INDUSTRIAL TIRES

We think you'll like THE GOODYEAR TELEVISION PLAYHOUSE every other Sunday—NBC TV Network

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GET THIS...

Guide to the Choice of B&W Seamless Mechanical Tubing For Your Products

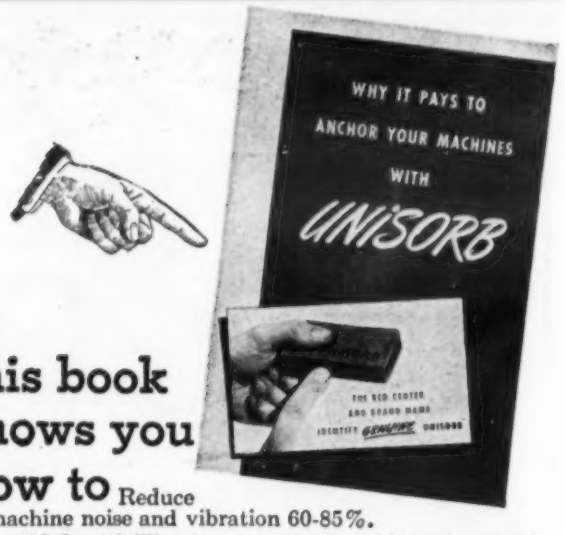
Concise information on characteristics of hot-finished, cold-drawn, and roto-rocked B&W Seamless Mechanical Tubing.

Send for Bulletin TB-340

TA-1743 (M)

THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION
Beaver Falls, Pa.—Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

▲ For more details circle **NED-162 E3** on enclosed inquiry slip ▲



this book shows you how to Reduce machine noise and vibration 60-85%.

Avoid floor drilling by mounting machines the modern way, without bolts or lag screws.

Reduce maintenance costs by eliminating transmitted vibration which damages machines, floors and buildings.

Save time and money when installing new machinery or repositioning present machinery.

Write today for your free copy of "Why It Pays To Anchor Your Machines With UNISORB."

THE FELTERS COMPANY
224 South Street, Boston 11, Massachusetts

UNISORB® MOUNTINGS are used with our special adhesive. UNISORB is also available pre-coated with adhesive, for use with machines that do not require shimming.

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TO CUT YOUR KEYWAYS IN ONE MINUTE FOR ONE CENT

CUT THIS COUPON
and get complete specs and prices on du MONT *Minute Man*®
KEYWAY BROACHES and KITS

The du MONT CORPORATION, Greenfield, Mass.
MAIL ME FREE CATALOG and PRICE LIST D

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Company.....
Address.....

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SHOVEL TYPE LOADER
fits standard industrial tractors and handles bulk type materials

Available with eight accessory attachments, this Shoveloader is designed to speed bulk materials handling. It is offered in six models with various capacities, dumping heights and forward reaches and can be mounted on Case, Minneapolis-Moline, Shepard and Oliver industrial tractors. Unit is engineered to crowd and dig below tractor level, and design assures safe operation.

Basic attachment is material bucket for materials loading and unloading. Other attachments are combination coal and snow bucket, bulldozer, lifting crane, sweeper for snow clearance and clean-up, rear leveling blade scarifier and logging fork. Double-acting hydraulic cylinders provide precision control of loads in any direction. Forward reach ahead of tractor radiator is 66 to 72 in. This allows trucks, hopper and bins to be loaded evenly from single tractor position. Made by **Baker-Lull Corp.**, Dept. KP, 376 W. 90th St., Minneapolis 11, Minn.

▲ For more details circle **NED-165 E3** on enclosed inquiry slip ▲

DRAFTING TABLE
adjustable through wide range and can be used with ordinary chair

Use of the Tec-Table low height drafting table requires only an ordinary chair as edge of top nearest the user is only 30½ in. above the floor in its

lowest position. Top also adjusts to the same height as other drawing tables for use with a stool, or can be made level at 41 in. above the floor. Table top is 3 x 6 ft and has an anodized aluminum molding for a T-square guide. At the left side is a two-drawer letter file, while on the right side is a palette table with two sliding shelves for supply storage. Bottom shelf is open at both ends for storage of long rolled up prints. Front of table has shelf for reference material, so that when tables are used in tandem, the draftsman uses the shelf behind him. Made by **Tectonic Services, Inc.**, 2076 E. 36th St., Cleveland 15, O.

▲ For more details circle **NED-166 E3** on enclosed inquiry slip ▲

PULPWOOD STACKER

Flexible Stacker Systems for piling pulpwood at low cost. *Write for data.*

THE JEFFREY MANUFACTURING CO.
Columbus 16, Ohio

IF IT'S MINED, PROCESSED OR MOVED ...IT'S A JOB FOR JEFFREY!

sales offices and distributors in principal cities

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Handle Drums with Ease

...ON ALVEY CONVEYORS

You can simplify your drum traffic, eliminate dangerous and costly man-handling by putting drums on Alvey Conveyors.

Whether it's drums, bags, boxes, cartons, sacks—or any other packaged goods you are moving, it may pay you to call in an Alvey engineer. He will show you how Alvey is helping other companies like yours. No obligation, of course.

ALVEY CONVEYOR MFG. CO.
87A 9259 Olive Street Road, St. Louis 24, Missouri

ALVEY

BRANCH OFFICES IN PRINCIPAL CITIES

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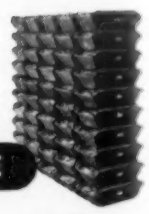
STANDARD BOXES for SPECIAL JOBS!

• For any problem you have in handling small parts, there is a standard NesTier custom-made to fit your requirements. A production line product, the NesTier effects savings in initial cost and on the job—from stock room to loading dock.

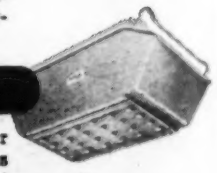


STOCK ROOM OR STORAGE

The only box that will serve alone as a permanent stock room fixture. No racks needed as tiered units lock themselves together to form rigid stacks. Parts in all units are visible and accessible.

PRODUCTION

NesTiers were designed for production line work. Empty, they nest to save space. Filled and tiered, they lock together with contents of all units visible and accessible. They are easily transported by truck, roller or overhead conveyor or by hand.

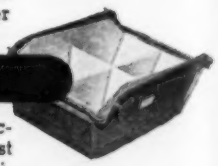


DRAINAGE

Here is the standard steel NesTier with a lanced bottom that permits rapid drainage of contents without allowing small parts to slip through. No need to transfer parts when this box is used.

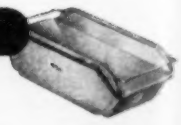
DEGREASING

No need to change boxes for any dipping or degreasing operation with this NesTier expanded metal basket. Formed in the distinctive NesTier shape, this unit is as rugged as the sheet steel box and retains all NesTier features.



PROTECTION

NesTier fibre inserts perform two functions. Parts are protected against damage from metal box and a variety of parts may be carried without becoming mixed. Furnished with or without dividers.



SHIPPING

The NesTier "snap on" lid keeps parts from jouncing out while being transported. Units with lids attached can be tiered allowing parts to be stored or transported and yet keep clean.

NesTiers are formed of one-piece sheet steel, with or without lanced bottom; zinc plated expanded metal; galvanized; stainless steel or aluminum. All units and accessories interchangeable. Two standard sizes.

NESTIER
IT NESTS - IT TIERS

THE CHAS. WM. DOEPKE MFG. CO., Inc.
METAL SPECIALTIES DIVISION • ROSSMOYNE, OHIO

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FOR PRECISION GROOVING, RECESSING AND BACKFACING

Versatile **MAXWELL** recessing tools can be used on any drill press, boring mill, turret lathe, radial drill or milling machine. Ball-bearing pilots and high speed or carbide cutters are interchangeable to handle any job within range of holders.

MAXWELL recessing tools are precision built for sustained accuracy in production runs . . . yet take cuts at unusually high feeds. 4 sizes available for ⅜ to 4-inch holes.

Write today for literature.

1055-MC

THE MAXWELL COMPANY

390 Broadway • Bedford, Ohio

For more details circle NED-170 E3 on enclosed inquiry slip

STURTEVANT DUSTLESS BLENDERS

Thoroughly Blend Substances into an Inseparable Mass

The 4-Way Mixing Action of the Sturtevant Dustless Blenders thoroughly mixes two or more substances into an inseparable whole . . . every part of which is the same analysis. Single receiving and discharging opening insures tight sealing during mixing process. "Open-door" accessibility permits thorough cleaning. The fast, accurate mixing operation increases output . . . cuts mixing costs. Mixing capacities from ¼ ton to 75 tons per hour. Write.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASS.

For more details circle NED-171 E3 on enclosed inquiry slip

SPRACO NOZZLES

Write for NOZZLE CATALOG *to*

SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-172 E3 on enclosed inquiry slip

HAND TRUCK WHEELS
designed to resist corrosion

Completely sealed tapered roller bearing for antifriction operation under both radial and thrust loads has been applied to Neotread hand truck wheels which consist of Neoprene cushion tire bonded to fiber-impregnated hard rubber core. Die-cast screw-on hub caps have Neoprene seals and keep dirt and moisture out of bearing. Design assures long life in plants where highly corrosive conditions prevail. Made by **St. John & Co.**, 5810 S. Damen Ave., Chicago 36, Ill.

For more details circle NED-173 E3 on enclosed inquiry slip

UTILITY ELEVATING TABLE
load capacity is 2000 lb

Table measuring 24 x 35 in. can be raised or lowered hydraulically from 28 to 44-in. height by means of two-speed foot-actuated pump on this 1-ton capacity hydraulic utility table. One-piece reinforced steel top rotates 360 degrees and locks in position. Four tubular truss members distribute load to base which is equipped with four 6-in. roller bearing casters. Floor lock has ample clearance when raised. Made by **Rack Hydraulic Equipment Corp.**, Dept. N-1, Connellsville, Pa.

For more details circle NED-174 E3 on enclosed inquiry slip

INDUSTRIAL CASTERS
with various bolt hole spacings

Series 12 Universal and series 13 Rival industrial casters are easily attached by large formed steel top plates featuring a variety of bolt hole spacings. Both series are rated as medium duty and are made in rigid and swivel models ranging from 3¼ to 8 in. diameter, with wheels of steel, Rolite, Texite, Moldon and other materials. Oilite, plain or standard roller bearing wheels and "protected" pressure lubricant fittings are other features. Made by **Albion Industries, Inc.**, Dept. NED, Plastic Rd., Albion, Mich.

For more details circle NED-175 E3 on enclosed inquiry slip

Send for a sample of

G-8

the new grade of laminated plastics

SYNTHANE is now producing G-8—a new, lower-cost glass mat melamine laminate for power and lighting applications.

In addition to combining high fire-and-arc-resistance with excellent mechanical and chemical properties, this new grade of SYNTHANE laminated plastic offers a considerable saving whenever its use is appropriate. G-8 costs less than continuous filament glass-base material—and its dielectric properties are good. Ease in fabrication makes G-8 adaptable to many electrical applications. To learn more about this new material—about its high strength, light weight, low inertia, fire- and corrosion-resistance, and combinations of these properties and a sample for examination—just clip and send the coupon below.

SYNTHANE

Manufacturers of laminated plastics
SHEETS
RODS • TUBES
MOLDED-LAMINATED
MOLDED-MACERATED
FABRICATED PARTS

SYNTHANE CORPORATION
N. E. River Road, Oaks, Pennsylvania

Gentlemen:
Please send me a sample of new G-8 and complete information on properties.

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Address_____
City_____ Zone_____ State_____

For more details circle NED-176 E3 on enclosed inquiry slip

REDUCE COSTS ON "SMALL-WORK" GRINDING & FINISHING JOBS with

Foredom FLEXIBLE SHAFT MACHINES

YOU GET ALL these features superior

- Feather-weight, finger-tip-controlled handpiece (pencil size or larger) which eliminates operator fatigue.
- Choice of 5 handpiece types (all instantly interchangeable). You fit the handpiece to the job at hand.
- Extra good flexing qualities in the flexible shaft assembly for effortless maneuverability.
- Longer motor life because motor is not dwarfed to fit the hand.
- High speed which does not drop precipitately under load.
- Silencer-equipped flexible shaft for vibration-free performance.

BENCH OR HANG UP MODELS FOR HEAVY OR LIGHT DUTY

Also flexible shaft tools attachable to your own drill press or motor

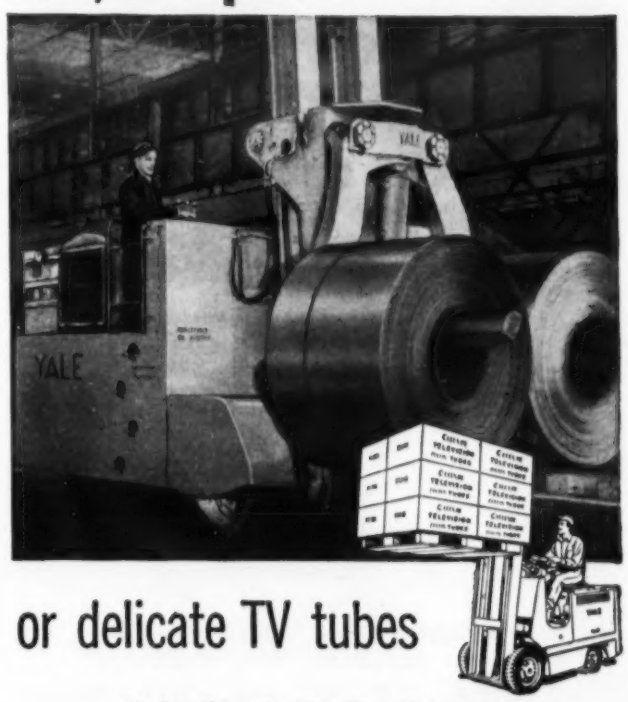
Use Foredoms to GRIND, POLISH, DRILL, ROUT, CARVE, MILL, SAW, SLOT, CLEAN, SAND, ETCH, ENGRAVE, etc., etc.

Write for Catalog 5264

FOREDOM Electric Co., Dept. 5264, 27 Park Place, N.Y. 7, N.Y.

For more details circle NED-177 E3 on enclosed inquiry slip

100,000 pounds of steel



or delicate TV tubes

Yale Electric Trucks give you the safer way to move more materials

No matter what your handling problems may be, you can solve them with YALE Electric Trucks. Industries of every kind...companies of every size ...are cutting handling costs as much as 75% with YALE equipment and methods...saving time, work and manpower, too. Get one of the wide range of standard models in the capacity you need to become your plant's most versatile tool...or get specialized trucks or attachments for your specialized handling jobs. One or both...a single truck or a fleet...you'll get more maintenance-free, 'round-the-clock service with safer YALE TRUCKS.

YALE*

MATERIALS HANDLING EQUIPMENT
*Registered Trade Mark

MAIL THIS COUPON TODAY

The YALE & TOWNE Manufacturing Co., Dept. 375
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Please have your local representative call for an appointment.

Company_____
Name_____ Title_____
Street_____ City_____ State_____
In Canada write: The Yale & Towne Mfg. Co., Box 337—Postal Station "A"—Toronto

Gas, Electric, Diesel Lift Trucks • Worksavers • Hand Trucks Hand and Electric Hoists • Pul-Lifts

For more details circle NED-178 E3 on enclosed inquiry slip

Nugent pressure filter installed on turret lathe for filtering cutting compound.

GET THESE
BIG ADVANTAGES
WITH NUGENT CUTTING OIL and COOLANT FILTERS

1. Oils and coolants are filtered 99.8% clean—can be used over and over again—oil savings almost 100%
2. Tool life is lengthened
3. Rejects reduced through greater accuracy and better finishes.

Scientifically designed, Nugent cutting oil and coolant filters provide 20 times more filtering area than other filters of comparable size. Capacities range from 1/4 to 320 GPM. Write for full details. For larger capacities, ask about Nugent gravity filters.

Wm. W. Nugent & Co., Inc.
421 N. Hermitage Ave. CHICAGO 22, ILLINOIS
Est. 1897
Oil Filters, Oiling and Filtering Systems, Telescopic Oilers, Oiling Devices, Sight Feed Valves, Flow Indicators . . . Representatives in Principal Cities

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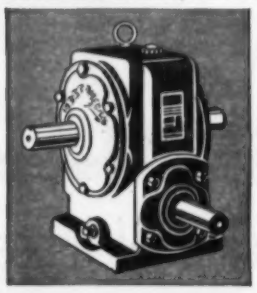
NEED SPEED REDUCERS?
250,000 cost-wise industrial buyers agree . . .
Best Buy is BOSTON Gear REDUCTORS

Deliver more trouble-free horsepower per dollar—last longer. Full range of types and sizes from .005 hp. to 36 hp.



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BOSTON GEAR DISTRIBUTOR
Catalog on request. Ask your Boston Gear Distributor, or write: Boston Gear Works, 69 Hayward Street, Quincy 71, Mass.

For more details circle NED-180 E3 on enclosed inquiry slip

HOLD LABELS SECURELY! . . TO TIN, METAL, GLASS

Grip-Tight is ideal for food, chemical, paint cans

GRIP-TIGHT Label Paste, the time tested resin emulsion paste, for hand brushing, definitely holds paper labels smoothly, easily, permanently to hundreds of surfaces and materials including: tin cans, metal pails, steel drums, lacquered, painted, varnished surfaces, glass bottles, metal parts, etc.

Use it for attaching product labels, instruction and caution labels, Express Waybills, circuit diagrams . . this *ONE* adhesive may do all your labeling work.

Fill in coupon for further details or send for trial shipment today.

MAIL THIS COUPON TODAY!

Gentlemen: Please ship F.O.B. Chicago or New York, the following trial order ON APPROVAL. Invoice to be cancelled if merchandise not satisfactory.

. . Quart Jars Grip-Tight at $1.15 ea.
. . Gallon Jars Grip-Tight at $3.40 ea.
☐ Send Technical Bulletin describing Grip-Tight and complete price schedule.

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Address _____
City _____ State _____

PAISLEY PRODUCTS INCORPORATED
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products
1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st STREET, NEW YORK 19, N. Y.

For more details circle NED-181 E3 on enclosed inquiry slip

INDUSTRIAL WHEELS
welded construction, in four sizes

Series of all-welded pressed steel wheels gives a low-cost unit for use where tire changeability or specific load requirements are not major considerations. Made in four sizes, 6 in., 8 in., 10 in., and 12 in., they are available with either ball or Oilite sleeve bearings, and choice of semipneumatic or solid rubber tires is optional. Made by **Goddeyne Wheel Products Co.**, 1301 N. McLellan St., Bay City, Mich.

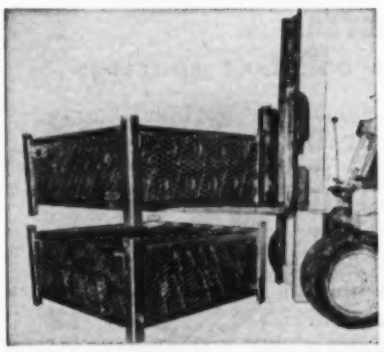
For more details circle NED-182 E3 on enclosed inquiry slip

STORAGE UNITS
for bar, pipe and rod

Easily loaded and unloaded bar, pipe and rod storage units are capable of holding lengthy material in a minimum of space. They are available in double-face models for center or open floor use, and single-face models for use against a wall. Finish is green baked-on enamel. Made by **Lyon Metal Products, Inc.**, 324 Clark St., Aurora, Ill.

For more details circle NED-183 E3 on enclosed inquiry slip

STACKING-HANDLING BOXES
accommodate up to 7000 lb



Time, labor and space savings are reported for steel Stak - Boxes for transporting and storing parts and materials. They can be handled with crane, fork truck, boom truck or dollies. Heavy formed steel frames with sides and bottom of 9-gage unflattened expanded steel assures strength and rigidity. Boxes measure 50 in. square at tou, 49 in. square at bottom and 24 in. high. Tapered design provides stable stacking. Made by **Morrison Steel Products, Inc.**, 700 Amherst St., Buffalo 7, N. Y.

For more details circle NED-184 E3 on enclosed inquiry slip

AJUSTRITE TRADE MARK

RSC Models

AUTOMATIC ADJUSTABLE CHAIRS

Ajustrite (formerly Kewaunee) adjustable chairs and stools are used extensively in Factories, Laboratories, Hospitals, Offices, Schools, Colleges, and Government Agencies. User adjusts to any desired height by merely lifting seat—no screws, bolts or tools.
Choice of 18 models. Height adjustment 15" to 20"; 18" to 26"; 24" to 35". Seats of plywood, hardwood, or molded FOAM RUBBER cushion. Self aligning back rests—horizontal and vertical adjustment.
Write for literature and free trial offer

AJUSTO EQUIPMENT CO.
2144 Madison Ave. Toledo 2, Ohio

For more details circle NED-185 E3 on enclosed inquiry slip

"YANKEE" VISES

for accurate, work holding START-TO-FINISH

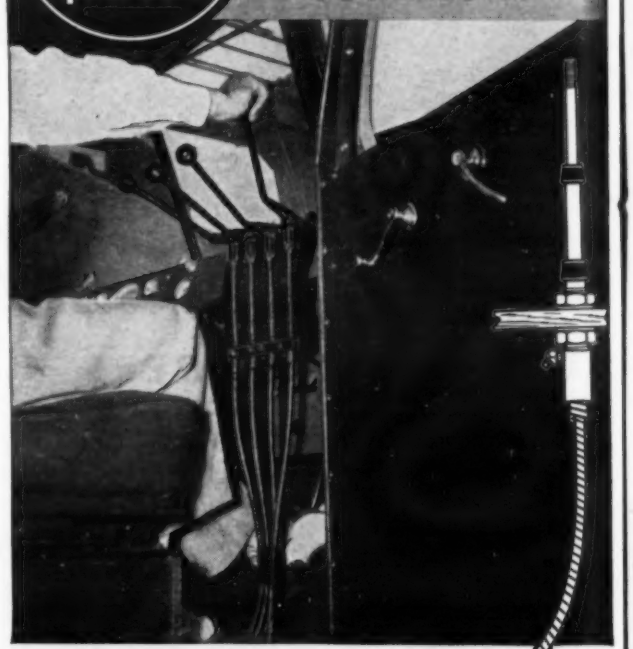
Every operation is lined up square and true in a "Yankee" Vise. Carefully machined . . . top, bottom, sides and front end to give accurate alignment in any position. Easily made into jig. V-grooved hardened steel block furnished with each "Yankee" Vise. Four sizes . . . 1½", 2", 2¾" and 4" jaw widths. Write for "Yankee" Tool Book.

YANKEE TOOLS NOW PART OF STANLEY THE TOOL BOX OF THE WORLD

NORTH BROS. MFG. CO.
Philadelphia 33, Pa.

For more details circle NED-186 E3 on enclosed inquiry slip

an ACCO product
TRU-LAY PUSH-PULL CONTROLS



for Continuous or Intermittent Transmission of Reciprocal Motion

SOLID . . . as a rod
FLEXIBLE . . . as a wire rope

Tru-Lay Push-Pulls snake around obstructions. Provide positive remote action. Operate while flexing, as on shakers. Few or many bends. Short or long distances. Ruggedly constructed for years of service. Capacities up to 1000 pounds input.

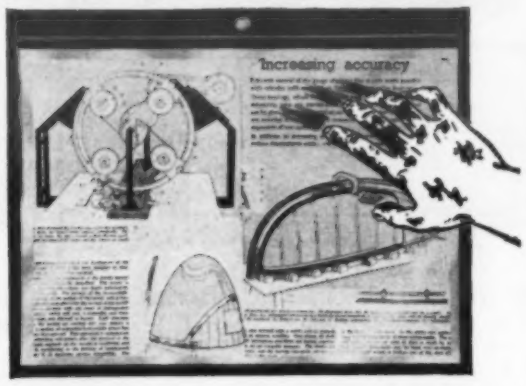
Write our Detroit office today for DH-287

TRU-LAY PUSH-PULL CONTROLS

ACCO
AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE
601 Stephenson Bldg., Detroit 2
2475 Porter St., Los Angeles 21 • Bridgeport, Conn.

For more details circle NED-187 E3 on enclosed inquiry slip

YOU CAN TRUST HIS EYES— BUT NOT HIS GRIMY HANDS!



A worker doesn't read a job ticket with his eyes alone. He also reads with his finger tips. And the little smudge he leaves behind is just enough to ball up your instructions—and leave a trail of bad blood, and bad mistakes.

So why take chances with a grease spot, when for a few pennies you can slide your work-sheet into a KLEER-VU plastic envelope. Then you are sure that every line and figure, dot and dash will stay sharp enough for honest eyes to read, and grimy hands to touch.

Ask for your FREE Kleer-Vu transparent envelope today. It's a trouble-saver, and a money-saver.

AMERICAN KLEER-VU PLASTICS, INC.
53-06 Grand Ave. Maspeth 78, N. Y.

For more details circle NED-188 E3 on enclosed inquiry slip

Industrial CRANES Improve Your Profit

INDUSTRIAL CRANE & HOIST CORPORATION
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The Improved Hydraulic

PULLEY PULLER

For Removing Pulleys Wheels, Gears, Couplings Sheaves, etc.

One man can do it in minutes—even if objects are stuck fast. No crowbars, sledges or blowtorches. No damage to equipment. Puller is adjustable—easy to move—rugged. Hundreds being used in industry.

- 5-ton size on wheels $92.50
- 20-ton size on wheels $290.00
- 50-ton size as shown $655.00

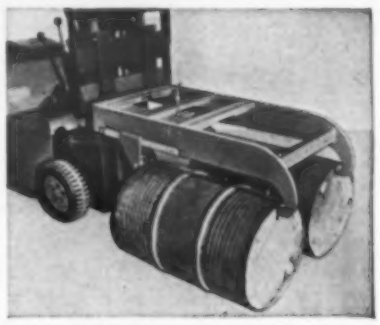
(F.O.B. Factory)

Write for complete information — Catalog E

INDUSTRIAL ENGINEERING EQUIPMENT CO.
122-124 E. 4th St. Davenport, Iowa

For more details circle NED-190 E3 on enclosed inquiry slip

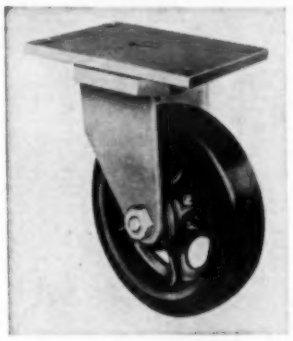
DRUM HANDLING ATTACHMENT automatically adjusts to drum size



Drums ranging in overall length from 26 to 38 in. can be lifted and tiered horizontally, either singly or in pairs, empty or full, by a drum handling attachment for Clark fork trucks. It is interchangeable on entire truck line and is semiautomatic in operation, adjusting itself to compensate for difference in drum sizes. Width of attachment is 26½ in. and weight is about 300 lb. No tools are required for mounting or dismounting. Made by **Clark Equipment Co.**, Industrial Truck Div., 1952 Arze St., Battle Creek, Mich.

For more details circle NED-191 E3 on enclosed inquiry slip

HEAVY DUTY SWIVEL CASTERS in 6, 8, 10-in. double race types



Large diameter outer ball race combined with Timken thrust bearing insure easy swiveling under heavy loads of series 27 double race swivel casters. Replaceable bolt axle is standard. Caster is available with semi-steel roller bearing and molded plastic wheels in 6, 8 and 10-in. sizes and with vulcanized rubber-tired roller bearing wheels in 8 and 10-in. sizes. Made by **Fairbanks Co.**, Dept. 43, 395 Lafayette St., New York 3, N. Y.

For more details circle NED-192 E3 on enclosed inquiry slip

LIFT TRUCKS match lifting speed to load weight

Line of hydraulic lift hand trucks covers capacities from 500 to 3000 lb, and lifting heights from 36 to 98 in. Manual models feature a Varilift adjustable control which matches the lifting speed to the weight of the load. Models in the line include Grand Lift Stackers, having improved steering and rolling characteristics; Electric Lift Stackers, powered either by auto batteries or direct from a line; and the Grand Shop Caddy, in five models, one of which has an extra large pallet to permit the safe loading of appliances to trailer tailgate heights. Made by **Allied Mfg. & Sales Co.**, 201 N. Wells St., Chicago 6, Ill.

For more details circle NED-193 E3 on enclosed inquiry slip

SPEED UP ★ PRODUCTION ★ MATERIALS HANDLING ★ MAINTENANCE

WITH A

HEIN-WERNER

20 TON PUSH and PULL HYDRAULIC JACK

You'll be amazed at the time and manpower you can save on tough lifting, moving, pressing, ejecting, clamping, or straightening jobs with a Hein-Werner J-20 Hydraulic Jack.

The J-20 can be carried anywhere in the plant . . . set up in seconds . . . easily operated by one man. It will push up to 20 tons or pull 13½ tons. You merely turn a valve from right to left to change the action. Remote control pump works at any angle, in any position, without becoming air-bound. Safety valves prevent overloading. Varied attachments are available to adapt the jack perfectly to any type job. Other Hein-Werner models of 4 and 10 ton capacities are also available. See your industrial supply distributor or write us.

HEIN-WERNER CORPORATION
Waukesha, Wisc.

Hein-Werner HYDRAULIC JACKS

For more details circle NED-194 E3 on enclosed inquiry slip

at Cleveland Builders Supply

These 7,200 lb. concrete "Dox Planks" move safely on a Robbins and Myers "Freeway"* system. Two 8,000 lb. capacity R & M Twin Hook Hoists on American Monorail Co. track may help solve your "traffic jams." Write today for your copy of Bulletin 875, describing these versatile hoists.

**Materials handling on a separate overhead level.*

TAKE IT UP WITH

ROBBINS & MYERS INC

HOIST AND CRANE DIVISION, SPRINGFIELD 99, OHIO

For more details circle NED-195 E3 on enclosed inquiry slip

If you have a LIFTING PROBLEM you need this VALUABLE BOOK!

Actual illustrated case studies of lifting and materials handling problems in warehouses, industrial plants, laboratories, print shops, hospitals, terminals. This valuable book shows how Globe OiLIFTS help you make the most of manpower and keep costs under control. Use the coupon to get this book *free*.

GLOBE HOIST COMPANY
1000 E. Mermaid Lane, Philadelphia 18, Pa.

Globe Hoist Company NED-529A
1000 E. Mermaid Lane, Phila. 18, Pa.
Send me without charge or obligation a copy of "Case Studies in Modern Lifting."

Name.....
Company.....
Address.....
City and Zone.....State.....

For more details circle NED-196 E3 on enclosed inquiry slip

DUO-SAFETY
all aluminum
STEP LADDERS

LIGHT WEIGHT FOR EASE OF HANDLING—BUILT TO LAST A LIFETIME!

Here's the perfect ladder for all types of industrial uses . . . manufactured of aluminum for strength, lightness, and resistance to moisture . . . steps and braces strongly reinforced . . . equipped with rubber safety shoes. Many other models available in the complete Duo-Safety Line.

—Write for Colorful File Catalog—

DUO-SAFETY LADDER CORP.
809 — 9th St., OSHKOSH, WIS.

▲ For more details circle NED-197 E3 on enclosed inquiry slip ▲

Something NEW IN WHEELS!

DICO COMPANY

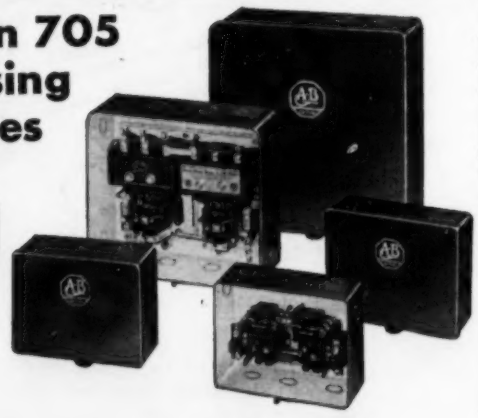
"Non-breakable" Heavy Steel Plate Construction.

"Easy-rolling composition" Molded-On rubber tires. Roller bearings. Finished hub end caps.

206 S.W. 16th ST., DES MOINES, IOWA

▲ For more details circle NED-198 E3 on enclosed inquiry slip ▲

Bulletin 705 Reversing Switches



- Contactors mechanically interlocked
- Silver-alloy contacts need no cleaning

This complete line of switches provides reliable across-the-line starting and reversing of polyphase squirrel-cage and slip-ring motors, as well as certain types of single-phase motors used on machine tools and other industrial equipment. May also be used in motor plugging operations. Write for descriptive bulletin. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

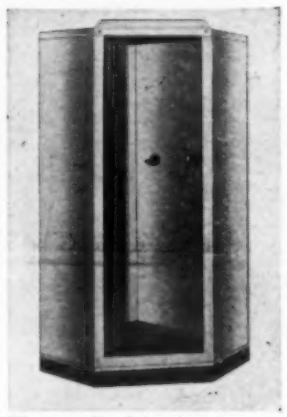
▲ For more details circle NED-199 E3 on enclosed inquiry slip ▲

TRACTOR SHOVEL
has power steering, torque drive

Maneuverable 1 cu yd capacity tractor shovel is equipped with torque converter drive and rear axle power steering. Static loads of 5000 lb capacity can be raised to 8 ft 2 in. dumping clearance in 9 seconds. Tractor turns in a 14-ft radius and travels up to 18.7 mph forwrad and 28.2 mph in reverse. The torque concerter eliminates shock loads on transmission and automatically applies power to meet varying loads. Load is centered on the 13:00 x 24 front driving wheels. Engine is 55 hp gasoline or diesel. Made by **Jaeger Machine Co.,** 350 Dublin Ave., Columbus 16, O.

▲ For more details circle NED-200 E3 on enclosed inquiry slip ▲

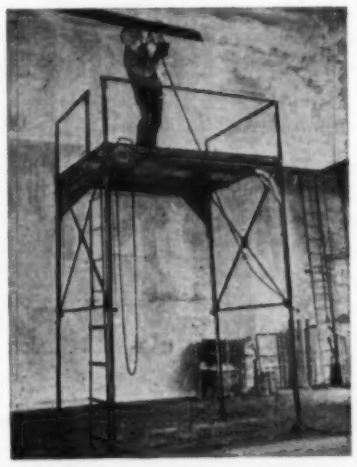
CORNER SHOWER
advanced design, modern styling



Modern styling is built into this corner shower, which also incorporates numerous advances in designing and engineering. Regency is the name of the heavy gage steel model, while Coronet is the aluminum model. Terrazo receptors are standard on both of the models. Manufactured by **Spartan Shower Stall Co.,** 816 Meeker Ave., Brooklyn 22, N. Y.

▲ For more details circle NED-201 E3 on enclosed inquiry slip ▲

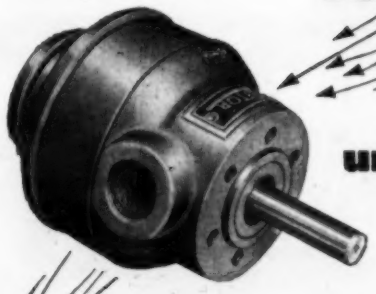
SCAFFOLD
raised and lowered by one man



Rated at 1000 lb capacity, this scaffold is adjustable from 6 to 12 ft in height by one man. Legs can be raised or lowered separately and each has a locking clamp. Swivel caster - equipped scaffold can be disassembled and is provided with load hooks for lifting. Platform sizes from 6 x 6 to 10 x 10 ft are available. Made by **Whiting Products Co.,** Box 1-A, 1000 Mill St., Camden, S. Car.

▲ For more details circle NED-202 E3 on enclosed inquiry slip ▲

the "label" tells you it's unique



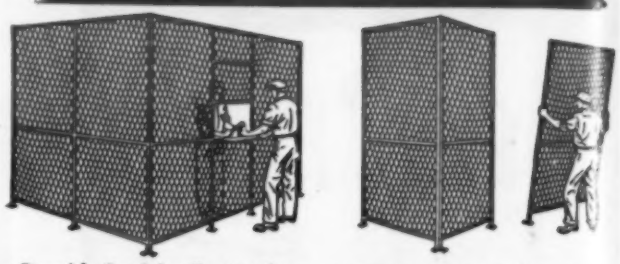
See the Gerotor name-plate on a hydraulic pump and you know what's inside . . . the renowned Gerotor mechanism. It minimizes friction, wear and slippage . . . assures higher efficiency at lower operating cost. Eleven sizes, some for pressures up to 1200 p.s.i. continuous, 1500 p.s.i. intermittent. Specify Gerotor!

Gerotor May Corp., Box 86, Baltimore 3, Md.

GEROTOR
HYDRAULIC PUMPS

▲ For more details circle NED-203 E3 on enclosed inquiry slip ▲

Protect TOOLS AND EQUIPMENT WITH ACORN WIRE MESH PARTITIONS



•Provide Positive Protection

Acorn Wire Mesh Partitions, by enclosing tool cribs and stock rooms, prevent tool and parts pilfering, give tight control of tools, material and personnel in these areas. Divide large open spaces into efficient, separate departments, cut down confusion. Cost much less than solid walls, permit passage of light, air, sound and heat.

•Simple, Quick to Erect

Made in inexpensive standard panels in two designs. Acorn Wire Mesh Partitions are easy to erect, take down, or move anywhere, with no need to move radiators or lights. Can be added to, or reduced in size. Doors can be moved, and corners made quickly to meet changing needs.

ACORN
WIRE and IRON WORKS
5910 S. Lowe Ave., Chicago 21, Ill.

▲ For more details circle NED-204 E3 on enclosed inquiry slip ▲

YOU CAN BE SURE.. IF IT'S Westinghouse

FREE
to D-C motor users

HERE ARE TWENTY PAGES OF FACTS ON THE LIFE-LINE SK D-C MOTOR. THIS BOOK SHOWS WHY AND HOW NEW DEPENDABILITY HAS BEEN ADDED TO THE WELL-KNOWN SK . . . INCLUDES INFORMATION ON CONSTRUCTION, MOUNTING, TYPES OF ENCLOSURES, PERMISSIBLE MOTORS.

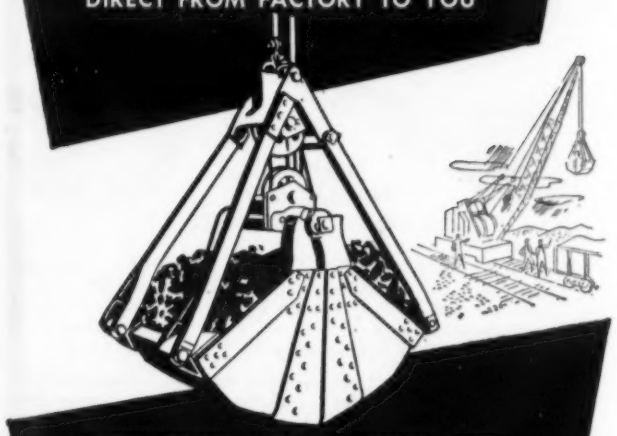
GET YOUR COPY FREE! Simply mail a penny post card asking for a copy of Life-Line SK D-C Motor Booklet, B-4595. Address: Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.
J-21567

Westinghouse
Life-Line D-C Motors

▲ For more details circle NED-205 E3 on enclosed inquiry slip ▲

For more details circle NED-206 E3 on enclosed inquiry slip

BROWNHOIST BUILDS
BETTER BUCKETS
— for less money
DIRECT FROM FACTORY TO YOU



ROPE-REEVE, POWER WHEEL AND LINK TYPE
Write for illustrated catalogue
INDUSTRIAL BROWNHOIST CORPORATION
BAY CITY, MICHIGAN

146

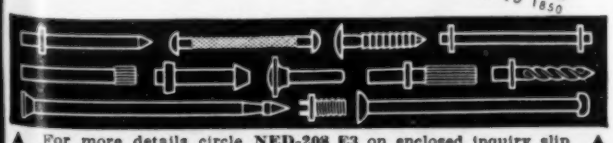
For more details circle NED-207 E3 on enclosed inquiry slip

WRITE FOR
FREE
fastener
catalog

A complete, comprehensive handbook on cold-headed nails, rivets, screws and other special fasteners. Check on ways to improve your assembly cost-wise, appearance-wise and from a standpoint of maximum effectiveness at minimum cost. One hundred years of experience are at your service. Write for price quotations or for suggestions on the redesigning of your present assembly.

JOHN HASSALL, INC.
398 Oakland Street, Brooklyn 22, N. Y.

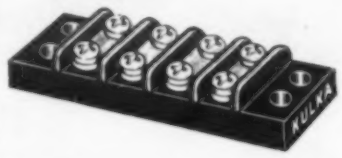
Hassall ESTABLISHED 1850



For more details circle NED-208 E3 on enclosed inquiry slip

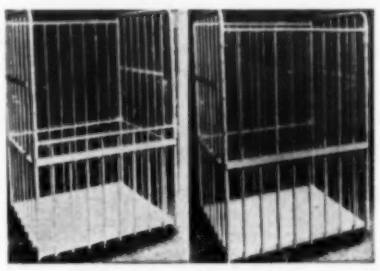
SMALL TERMINAL BLOCK
designed for electronic assemblies

It is reported that this miniature terminal block has all the electrical characteristics and physical strength of blocks twice its size. Overall length, with 22 double-screw terminals, is 6 in., height, including barrier, is 5/16 in., and width is ⅝ in. Terminals are completely separated by the barriers, which increase creepage distance between live parts and eliminate possible shorts from frayed wires. Made of molded thermosetting plastics, it can be ordered to comply with military specifications MIL-P-14C. Made by **Kulka Electric Mfg. Co.**, 633 S. Fulton Ave., Mt. Vernon, N. Y.



For more details circle NED-209 E3 on enclosed inquiry slip

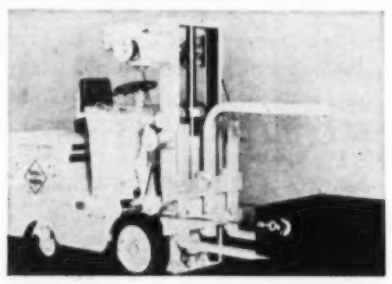
BUNDLE TRUCK
low front wall eases loading



Welded steel, 55-in. high BDN series bundle trucks feature low front wall for easy loading and telescoping door to close this wall for maximum load carrying. Door has stops every 6-in. for partial closing. Cleated wood floor is removable. Standard models can have 4-in. swivel caster on each end and two 5-in. rigid casters in center, or one 4-in. swivel caster on each corner. Inside dimensions range from 30 x 40 in. to 30 x 60 in. Three models feature vertical bars, while three have 6 x 6-in. mesh. Made by **Leebaw Mfg. Co.**, Dept. A, 65 Wayne St., Youngstown 2, O.

For more details circle NED-210 E3 on enclosed inquiry slip

MULTIPURPOSE FORK TRUCK
simplifies die handling operations



Designed for placing and removing dies on presses, this 4000-lb capacity multipurpose industrial truck is equipped with 42-in. forks, a 42-in. boom and pulling equipment. Truck has a 66-in. nontelescoping lift and can be used as standard fork truck when not handling dies. Added features are deadman control, hydraulic lift, four speeds forward and reverse and time acceleration. Made by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 3, O.

For more details circle NED-211 E3 on enclosed inquiry slip

WIRE MESH

Maybe it all *does* look pretty much the same at first glance. But when a firm has been making wire mesh for 70 years man and boy, there's bound to be a little more to it than meets the eye — a little more know-how in engineering and weaving, a little more quality in the product, a little more service and satisfaction for the user.

JELLIFF WIRE MESH is woven in all ductile metals
JELLIFF WIRE MESH is woven in all commercial weaves
JELLIFF WIRE MESH is woven in widths up to 72 inches
JELLIFF WIRE MESH is economical. Every foot runs true to the specifications.

★ ★ ★ ★

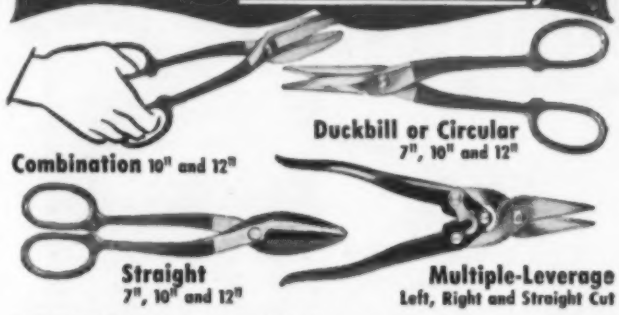
JELLIFF WIRE MESH is a quality product and has been for 70 years. You can depend on it.

Write today for full details about JELLIFF WIRE MESH, JELLIFF WIRE MESH PRODUCTS, and JELLIFF'S CONSULTATION SERVICE on wire-mesh engineering. Address Department 11.

THE C. O. JELLIFF MFG. CORP.
DIPPING BASKETS
LEKTROMESH
RESISTANCE WIRE
WIRE MESH PARTS
WIRE CLOTH
STRAINERS • FILTERS
SOUTHPORT CONNECTICUT
WIRE PRODUCTS jelliff SINCE 1860

For more details circle NED-212 E3 on enclosed inquiry slip

new... All-Purpose SNIPS with PROTO Professional Quality!



PROTO's new snips fill the needs of practically all industries, mechanics and craftsmen. Four basic styles cut hundreds of materials. They give smooth, fast, accurate cuts ... produce better finished work, clean and unbent...have great strength and toughness...are sturdily built. Buy these *professional-quality, all-purpose* snips from your PROTO dealer. Send 10¢ for 68-page catalog of entire line to

The PROTO Line Includes Wrenches, Pliers, Screwdrivers, Punches, Chisels, Sockets & Handles, and Many Others.

PLOMB TOOL COMPANY
2275Y Santa Fe Ave., Los Angeles 54, Cal.
5382

Eastern Factory—Jamestown, N.Y.

PROTO TOOLS
PROTO means PROfessional TOols

For more details circle NED-213 E3 on enclosed inquiry slip

For quality control you can be proud of

When you have inspection and quality control procedures you're proud enough of to talk about, they must be good.

These three advertisements were published by firms justly proud of their methods. All three use Kodak Contour Projectors as an example of the type of care they exercise in producing products of uniformly high precision.

Optical gaging with a Kodak Contour Projector provides a fast, accurate method of production measurement and inspection. Operators can get the work out in a hurry—little training is required. Accessories are available to make possible measurement of the most complex shapes.

To see how a Kodak Contour Projector can help you reduce inspection costs, improve quality, send for our new 12-page booklet. It gives you details of both the Model 2A, for precision micrometry, and the Model 3, for fast, routine gaging. For your copy, write to:

Industrial Optical Division
EASTMAN KODAK COMPANY, Rochester 4, N.Y.

the KODAK CONTOUR PROJECTOR

Optical Gaging

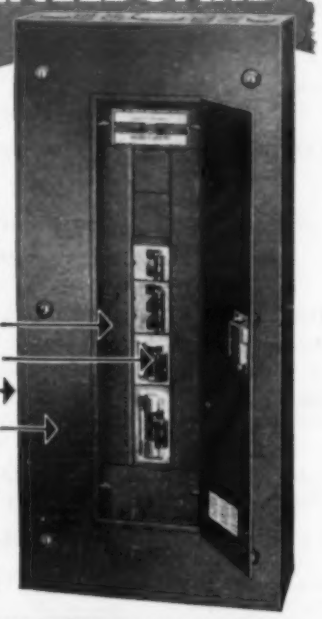
A new sound movie, Optical Gaging, shows how to simplify complex inspection problems. We'll tell you how to get it for a showing.

Kodak

For more details circle NED-214 E3 on enclosed inquiry slip

SQUARE D's

MHP DISTRIBUTION PANELBOARD



So easy to order and stock. "Off-the-shelf" delivery of packaged components!

INTERIOR
"PLUG-IN" BREAKERS
BOX
TRIM

for 240 Volt, 3 Phase, 3 or 4 wire power systems.

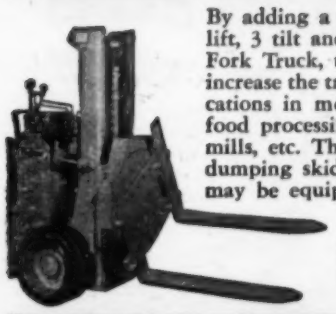
Write Square D Company, 6060 Rivard St., Detroit 11, Mich., for descriptive bulletin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

▲ For more details circle NED-216 E3 on enclosed inquiry slip ▲

BAKER 360° REVOLVING HEAD
—greatly increases FORK TRUCK utility



By adding a fourth motion (1 travel, 2 lift, 3 tilt and 4 ROTATION) to a Baker Fork Truck, this attachment can greatly increase the truck's utility on many applications in metal-working, chemical or food processing plants, foundries, paper mills, etc. The most common use is for dumping skid boxes—but rotating heads may be equipped with devices such as clamps for handling drums, paper rolls and other cylindrical objects. Operation is hydraulic, with a single control lever starting, stopping, selecting direction and speed of rotation.

A large electrical manufacturer saves $10,000 per year on scrap disposal operations with this Baker Revolving Head.

Write for Bulletin 1350-7

Baker industrial trucks

THE BAKER-RAULANG COMPANY
1245 WEST 80th STREET • CLEVELAND 2, OHIO

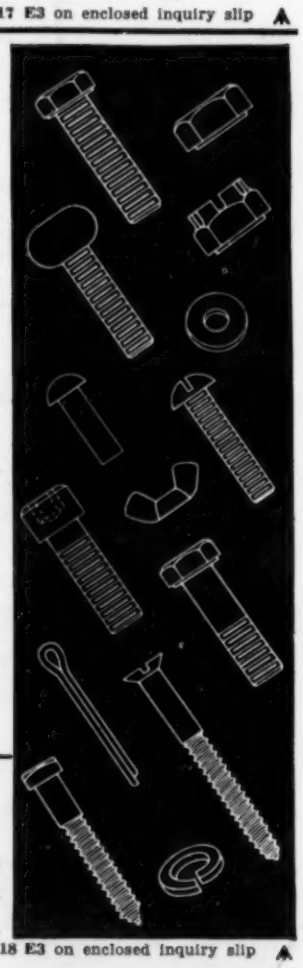
The Baker-Lull Corporation • Subsidiary, Minneapolis, Minn. Material Handling and Construction Equipment

▲ For more details circle NED-217 E3 on enclosed inquiry slip ▲

HARPER HAS THEM!

Everlasting Fastenings by the Dozen or the Million!

- Specialists in bolts, screws, nuts, rivets, washers and fastening accessories!
- In brass, bronze, copper, aluminum, stainless steels, Monel!
- For all problems involving corrosion, heat, abrasion, stress, appearance!
- America's largest producer of non-corrosive fastenings!
- Larger stocks, greater selection —over 7000 items!
- Deliveries from nearby warehouse and distributor stocks!
- Ask for complete Harper Price List and Stock Book!



HARPER

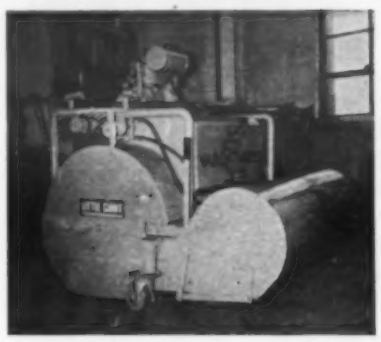
EVERLASTING FASTENINGS

The H. M. Harper Company
8212 Lehigh Ave.
Morton Grove, Ill.
Rush Harper Price List and Stock Book.

Name.....
Address.....
City.....State.....

▲ For more details circle NED-218 E3 on enclosed inquiry slip ▲

FORK TRUCK SWEEPER pick-up pan has larger capacity



One of improvements made in the Yard Bird fork truck sweeper is a pick-up pan with three times the capacity of former model and a dump bottom. Sweeper can be raised or lowered by the industrial truck on which it is hauled and can be emptied into any height container. Use of casters and a flexible mounting enables the sweeper to "hug" the surface it sweeps, regardless of floor irregularities. Unit is capable of sweeping up to 80,000 sq ft per hour. A sprinkler attachment lays dust, and removal of the pick-up pan adapts it for snow removal. Unit is powered by its own 6.8 hp gasoline engine. Made by **Little Giant Products, Inc.**, Dept. NE, 1530 N. Adams St., Peoria 3, Ill.

▲ For more details circle NED-219 E3 on enclosed inquiry slip ▲

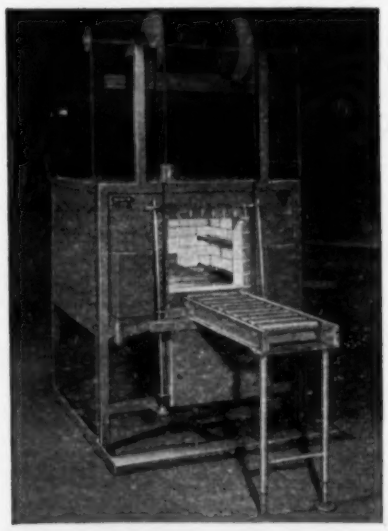
CONVEYOR FLOW DIVIDER controls multiple flow in set pattern to and from several lines

Flow of packages or cases from a single or multiple supply source can be controlled by this conveyor flow divider which directs the flow to receiving lines in a

predetermined pattern. It provides automatic dispatching and is built in a variety of vertical and horizontal styles to meet specific requirements. Standard equipment includes power drives, starters and control panel.

Device is so arranged that packages can be counted onto the divider from supply lines. If set to receive a counted allotment from any two sources and one is depleted, it will automatically take the supply from the third line. Equipment is also designed for such other services as three incoming lines and two delivery lines or one incoming and three delivery lines. Cases of different heights can be separately selected. Made by **Alvey Conveyor Mfg. Co.**, 9259 Olive Street Rd., St. Louis 24, Mo.

▲ For more details circle NED-220 E3 on enclosed inquiry slip ▲



This Model #RH-68 PERECO Electric Roller-Hearth Furnace is especially designed for rapid and easy handling of large or heavy loads, such as tools, dies, or products of similar nature which are difficult to load or unload from a hot furnace. Also ideally suited for enameling on bulky or heavy metal items. Typical of all Pereco Furnaces built to specialized job-requirements. Automatic temperature controls of all standard makes are available to meet the individual need. Tell us your need and let us propose the answer.

PERECO
ROLLER-HEARTH *Electric* FURNACE

Specifications

Chamber Size:	15" w. x 30" d. x 15" h.	Standard and Special units 450° F. to 5000° F.
Roller Extension:	15" w. x 36" l. (working ht. 30")	
Overall Size:	42" w. x 48" d. x 75" h.	
Counterbalanced Door:	Drop-type with roller mounted top edge	
Atmosphere Vent:	For release of fumes, located in arch	
Temperature:	1400° F. normal, 1500° F. maximum	
Connected Load:	20 KW, 220 volts, 60 cycle, 1 phase.	

Write today for Catalog

PERENY EQUIPMENT CO.
Dept. G, 893 Chambers Rd., Columbus 12, Ohio

PERENY EQUIPMENT COLUMBUS OHIO

▲ For more details circle NED-221 E3 on enclosed inquiry slip ▲

MERRILL MATERIALS HANDLING DEVICES

3-M-2

MERRILL BROTHERS
56-13 ARNOLD AVENUE MASPETH, N. Y.

▲ For more details circle NED-222 E3 on enclosed inquiry slip ▲

This 105-Ft. Conveyor Does Tremendous Job on One Horsepower!

STANDARD POPULAR SIZES AVAILABLE FROM STOCK

This rugged, 105-Ft. Carrier Compact Conveyor handles an abrasive bulk chemical — conveys it quickly and efficiently, on 1 H.P. The unit's integral, self-cleaning pan is only 8" wide and 3" deep — its over-all height is less than 13"!

Carrier Compact Conveyors can be equipped with dust covers, dividers, intermediate discharge sections, screen decks, etc., to meet your processing requirements. They are now successfully handling a variety of bulk chemicals and foods . . . metal chips and castings . . . small turnings . . . and other hot, wet, abrasive, sticky or hard-to-handle products.

Carrier Compact Conveyors are the smallest units in the *complete* Carrier line of Natural-Frequency Conveyors (the largest of which have capacities up to 200 tons per hour). These spectacular conveyors work on a unique vibrating principle which substitutes the natural resonant action of springs, for brute force.

Get all the facts on Carrier Natural-Frequency Conveyors, including vibration-free units and vibrating spiral elevators. *Write today!* Carrier Conveyor Corporation, Dept. 12, Frankfort Avenue at Clifton, Louisville 6, Ky.

"COMPACT" FEATURES

LESS POWER REQUIRED
(750-foot-tons per hour per H.P.)

LESS MAINTENANCE AND DOWN-TIME
(Less power + good design = good service)

NO DAMPENING UNDER LOAD
(Designed with extra power for specified load, with positive stroke)

MINIMUM SPACE REQUIREMENTS
(Over-all height of less than 13")

SCREENS, DEWATERS, SEPARATES, BLENDS, DRIES, COOLS
(Combines processing with conveying)

PROCESSING FEATURES AVAILABLE
(Dust covers, dividers, intermediate discharge sections, screen decks, etc.)

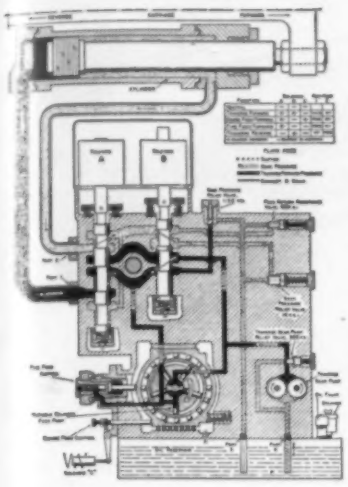
SELF-CLEANING
(Continuous smooth trough — no pockets)

WIDTHS FROM 6" TO 24"—LENGTHS FROM 5' TO 200'
(With integral pans of steel or other alloy metals, 12 gauge to ¼" plate, open or enclosed)

CARRIER
NATURAL-FREQUENCY
CONVEYORS

▲ For more details circle NED-223 E3 on enclosed inquiry slip ▲

ANY-FEED Oilgear Power Unit



For machine tool and other straight-line feeds

An amazing little fluid power feed pump for practically any machine tool or straight-line feed installation you can think of. It embodies the *Any-Feed* Oilgear Fluid Power unit with a 20:1 range and rapid traverse as high as 265:1 over feed rate. It provides undeviating precision day in and day out once the feed rate is set.

It installs *into* your assembly easily, or mounts nearby or remotely. Yet control of the many possible functions is found in the electric pushbutton station; or partial or completely automatic operation is available. It affords complete operating safety for all action is instantly neutralized in case of accident. All parts are completely and easily accessible. The design is simple; you mount, connect two pipes and control wires. Write for descriptive Bulletin 44200 now while you think of it. THE OILGEAR COMPANY, 1582 West Pierce Street, Milwaukee 4, Wisconsin. *Advt.*

▲ For more details circle **NED-224 E3** on enclosed inquiry slip ▲

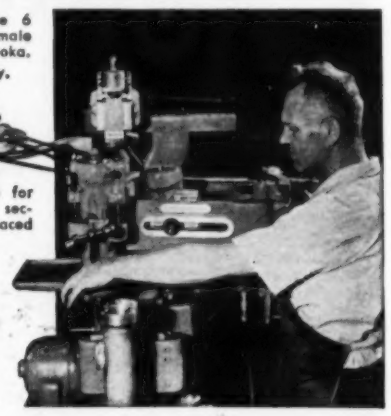
PANTOGRAPHY Licked This Job

THE pantograph is a versatile machine tool that does precision profiling, routing, die sinking, mold cutting, chamfering, grooving and engraving. It is credited with increasing production and securing better end results at lower cost.

Production by pantograph means high surface finish and repetitive accuracy — a dozen or thousands of identical pieces. The pantograph has high spindle speeds, up to 45,000 rpm, and uses enlarged masters that improve accuracy through a reduction ratio.

This machine is useful in machining ferrous or nonferrous metals and plastics, in regular or irregular shapes. It accommodates jobs ranging from dime size to areas of 10 by 20 feet . . . manual operation, or automatic.

JOB ILLUSTRATED: Profile 6 locking lugs for male and female sections of new 3.5" Bazooka.
MATERIAL: Aluminum alloy.
CUTTER: 5/32" dia. single flute, fast spiral H. S. steel running at 3,900 rpm, without coolant.
MASTER: 2 masters: one for male and one for female sections; 3 times oversize, traced manually.
HOLDING FIXTURE: Pneumatic-operated internal expanding type.
APPROX. TIME: 36 pieces per hour.
ALTERNATE METHODS: *None practical.*

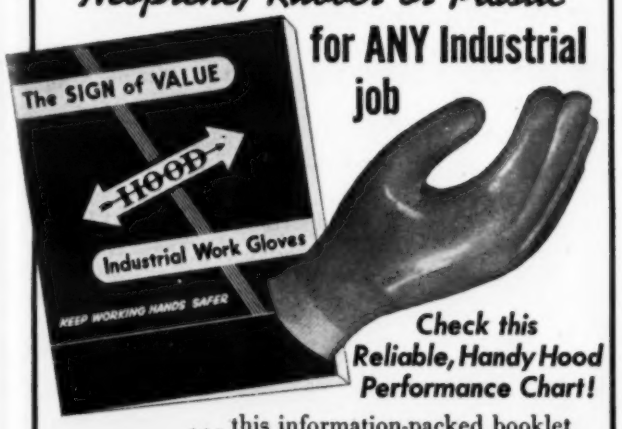


This "Pantography" booklet tells the complete story of faster production by pantograph. Write for it and the Gorton General Catalog, 1655: The George Gorton Machine Co., 1905 Racine Street, Racine, Wisconsin.

▲ For more details circle **NED-225 E3** on enclosed inquiry slip ▲

FREE *Send for your copy today*

Helps you choose the RIGHT Hood Glove — *Neoprene, Rubber or Plastic* for ANY Industrial job



Check this Reliable, Handy Hood Performance Chart!

. . . this information-packed booklet shows comparative wear and chemical resistance of Hood Neoprene, Rubber and Plastic Coated Gloves, and contains illustrations and full descriptions of the complete line of Hood Industrial Gloves — top choice for *every* job in *any* industry.

HOOD RUBBER CO.
Watertown, Mass.

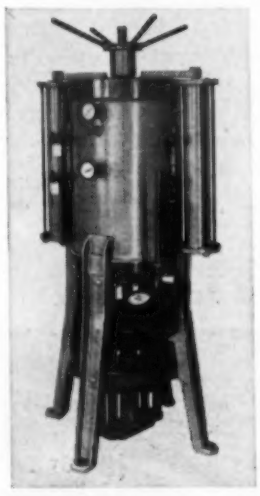
▲ For more details circle **NED-226 E3** on enclosed inquiry slip ▲

GRINDING WHEELS feature improved vitrified bond

Good performance for cylindrical, centerless, surface, internal, gear, tool and cutter, form and thread grinding and saw gumming is provided by improved vitrified bond on Norton grinding wheels. Identified by symbols "VG" on the wheels and named G-Bond, it holds abrasive grains until they have accomplished their cutting job, then releases them to make room for new grains with fresh, sharp cutting edges. Bond is used with many types of abrasives, including 32 and 38 Alundum, regular Alundum and 19 and 57 Alundum abrasives. Advantages are more work per wheel, faster and cooler cutting, more pieces per dressing, easier to dress, usable on wide range of jobs, hold shape and corners and good for crush dressing. Made by **Norton Co.**, 200 New Bond St., Worcester 6, Mass.

▲ For more details circle **NED-227 E3** on enclosed inquiry slip ▲

INDUSTRIAL TIRE CAPPER bonds rubber to metal wheels and makes molded rubber products



In addition to bonding solid rubber industrial tires to metal wheels, the improved R & W industrial capping machine can be used to produce various types of molded rubber goods. Rubber is vulcanized to metal wheels by sandblasting wheel surface, applying bonding agent, rubber vulcanizing cement and rubber, placing in molds and curing in the capping machine. Molded goods are made by cutting rubber close to shape of article to be molded, placing in mold and curing.

Machine operates with hydraulic pressure and will hold from 1 to 15 molds, depending upon depth, at one cure. It requires about 2½ hp to operate, as well as 50-psi steam pressure and 100-psi air pressure. Molds are available for all sizes through 12 in. diameter. Special wheel molds can be made to order, as can special molds for rubber articles. Made by **R. & W. Engineering Corp.**, P. O. Box 2329, Hickory, N. C.

▲ For more details circle **NED-228 E3** on enclosed inquiry slip ▲

Save Time, Save Money WITH 'DIAMOND H' SNAP-INS

Consistently tops in quality, "Diamond H" snap-in toggle switches, outlets, pilot lights and inter-connecting load plugs are making important contributions to the performance of leading makes of major appliances, electrical housewares, beauty parlor, air conditioning and ventilating equipment and other devices.

Users like them . . . for their dependability, their appearance *and the man hours they save on assembly lines.* Just snap them into place (wiring up before or after) and spring clips hold them firmly. Wide flanges eliminate need for close tolerances in finishing around installation holes.

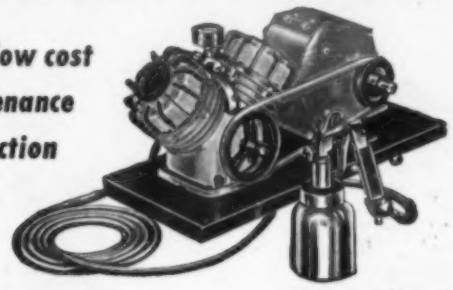
Switches, rated 15 and 20 A., 125 V.; 10 A., 250 V., A. C., and also with h.p. ratings. Pilots rated 115 V. or 230 V., A. C. All four devices available in black, white, brown or special color plastic to harmonize with your product. Send us your requirements today.

THE HART MANUFACTURING COMPANY
204 Bartholomew Ave., Hartford, Conn.

▲ For more details circle **NED-229 E3** on enclosed inquiry slip ▲

Speedy Sprayer PORTABLE PAINT SPRAYERS

for low cost plant maintenance and production



Dozens of handy, money-saving uses for these portable SPEEDY SPRAYERS! Operate anywhere in or out of your plant beyond the reach of air lines. Rugged, powerful, sprays all materials. Or use as source of compressed air, as vacuum pump or to inflate tires, etc. Absolutely clean, oil-free air assured by proved diaphragm principle employing no oily pistons. Order SPEEDY SPRAYER from your mill supply house or write direct for free catalog.

MODEL 444—½ H.P.
Heavy duty master twin. Delivers 4 cu. ft. air per minute at 40 lbs. Operates with ½ H.P. motor or gas engine. Complete with gun, 15 ft. air hose, less motor, **$66.00**

MODEL 890—¼ H.P.
2 cu. ft. air per minute at 30-40 lbs. pressure, less motor, **$36.50**

No. 778 Utility Paint Container for above models, holds 3 gals. paint. **$22.00**

W. R. BROWN CORP.
2673 Normandy Ave., Chicago 35, Ill.

Specialists in Portable Sprayers for over 20 years.

▲ For more details circle **NED-230 E3** on enclosed inquiry slip ▲

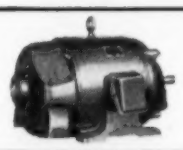
Century

SPLASH PROOF MOTORS

Protect your production from motor failure caused by squirted, spilled or splashing liquids. There are many types and sizes of Century motors now available in Splash Proof frames:

1 to 400 HP Squirrel Cage, Induction 3 Phase

2 to 400 HP Wound Rotor, Induction 3 Phase



1 to 7½ HP Repulsion Start Induction, Brush Lifting, Single Phase

1 to 20 HP Capacitator Start Induction Single Phase (Capacitator mounted separately on 7½ HP and larger)

The complete Century line ranges from ⅛ to 400 horsepower, A.C., D.C., Drip Proof, Splash Proof, Dust Proof or Explosion Proof. For complete information, contact your nearby Century Office or authorized Century Distributor.

Century C MOTORS

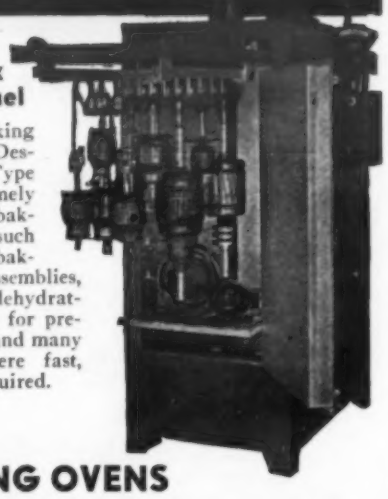
789

CENTURY ELECTRIC COMPANY
1806 Pine Street
St. Louis 3, Missouri

Offices and Stock Points in Principal Cities

▲ For more details circle **NED-231 E3** on enclosed inquiry slip ▲

50% FASTER BAKING ON REPAIR JOBS



Ideal for Synthetic Films • Dulux • Lacquer • Enamel

You can often cut baking time up to 50% with Despatch R S Batch Type Ovens. They're extremely adaptable for finish baking of small batches such as armatures . . . for baking paints on grills, assemblies, etc. . . . for drying, dehydrating or core baking . . . for preheating of plastics . . . and many other applications where fast, thorough heating is required.

DESPATCH
R S Batch Type
FINISH BAKING OVENS

They're shipped fully erected and do not require an engineer to set them up. Gas or electric fired, very economical, with working range from 200° to 500° F. Automatic heat control for desired uniform temperature. Sizes from 11 to 90 cu. ft. capacity, all easy to load and unload. When writing for literature, kindly tell us what type of work you have.

Write for Bulletin on R S Ovens

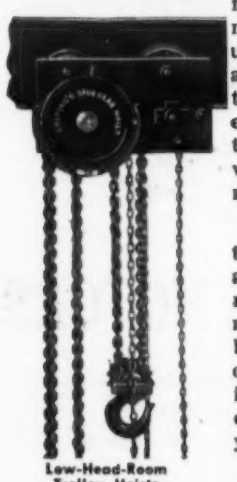
DESPATCH OVEN CO. Established in 1902

Manufacturers of ovens for:
Paint Finishing, Dehydrating, Curing, All Industrial and Laboratory Applications

325 DESPATCH BLDG., MINNEAPOLIS 14, MINNESOTA

▲ For more details circle NED-232 E3 on enclosed inquiry slip ▲

COFFING NOW OFFERS—
a complete spur-gear line



Low-Head-Room Trolley Hoists 1½- to 24-ton capacities.

Available in capacities from ¼ to 25 tons. This new line consists of regular spur gear hoists, army and low head room trolley types (with either plain or geared trolleys), extended hand wheel, and clevis connected hoists.

Now your Coffing distributor can take care of all your spur geared hoist requirements. That means something to you, because you can depend on good Coffing quality and service, on this extended line, to lower your maintenance costs.

Contact your Coffing distributor or write us for bulletins and his address — Dept. X5.

Model YCT Timken Bearing Hoists ¼- to 25-ton capacities.

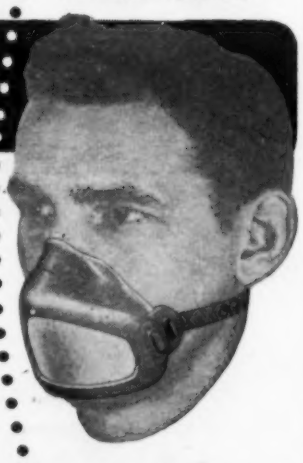
COFFING HOIST CO., Danville, Illinois

Quik-Lift Electric Hoists • Hoist-Alls • Safety-Pull Ratchet Lever Hoists • Mighty-Midget Pullers • Differential Chain Hoists • Load Binders • I-Beam Trolleys

▲ For more details circle NED-233 E3 on enclosed inquiry slip ▲

Now Better * than ever

FLEX-A-FOAM FILTER MASKS



For Safe, Economical Dust Protection

NEWLY designed for better-than-ever comfort and efficiency. It's easier to breathe through and talk through than an ordinary pocket handkerchief — yet filters nuisance dust particles as small as 1/25000 of an inch!

• **Economical** — Only Flex-a-Foam has long-lasting washable filter that outlasts throw-away type by more than 100 to 1. Filter savings alone more than pay total cost of mask.

• **Comfortable** — Self-adjusting to every face size. Can be worn with goggles or spectacles.

• **Simple** — Only four sturdy, long-lasting parts — all interlocking — all unconditionally guaranteed.

** New frame design positively locks out air leaks, permits speedy removal of filter for cleaning.*

Dust Protection your workers will welcome and *Wear*

FLEX-A-FOAM® FILTER MASK

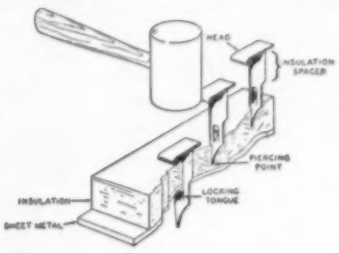
SAMPLE STILL ONLY $1.40 POSTPAID

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

▲ For more details circle NED-234 E3 on enclosed inquiry slip ▲

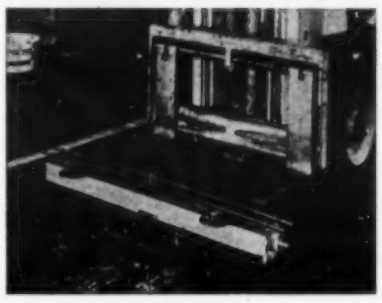
FASTENER FOR INSULATION
locks tightly with hammer blow

Lexsuco insulation clip is designed for use with semi-rigid and rigid insulation up to 2 in. thick and sheet steel up to 18 gage. It locks positively as it is hammered into position with a special locking tongue. One-piece construction is used in five standard sizes from ½ through 2 in. Made by **Lexington Supply Co.,** Dept. 134, 4815 Lexington Ave., Cleveland 3, O.



▲ For more details circle NED-235 E3 on enclosed inquiry slip ▲

MAGNETIC ROAD SWEEPER
can be pushed, pulled or suspended



Tacks, nails and other tramp iron is effectively removed from highways, parking lots and factory aisles by this Super-Sweeper magnetic road sweeper which can be pushed, pulled or suspended. Sweeper is made in 24, 36, 48 and 60 in. widths and in three magnetic strengths. Tubular steel handle, which is removable for storage and transportation, has an end loop which attaches to almost any trailer hitch. Wheels are fitted with punctureproof 8.00 x 2-in. tires. By removing wheels and handle, and attaching with built-in eyebolts, sweeper is quickly adapted for use on lift trucks. Stainless steel deflector prevents damage to sweeper face if large objects are encountered. Made by **Eriez Mfg. Co.,** 1325 E. Twelfth St., Erie, Pa.

▲ For more details circle NED-236 E3 on enclosed inquiry slip ▲

INSULATED TEST CLIPS
click-fit on standard test prods

Nylon insulated test clip provides positive electrical and mechanical clip connection to all standard phone tip test prods. Nylon insulation allows shockproof, short-circuitproof operation in excess of 600 v even the nose of the clip being fully insulated. Made in either red or black by **Industrial Devices Inc.,** 22 State Rd., Edgewater, N. J.

▲ For more details circle NED-237 E3 on enclosed inquiry slip ▲

NOW
one piece molded phenolic case for the
No. 41 *Levolier*® SWITCH

shown actual size

- easier wiring
- better insulated
- exceptionally rugged
- unconditionally guaranteed

Your troubles are over when you specify a Levolier No. 41 Switch. It is the only switch unconditionally guaranteed against failure in lighting circuits. And NOW it has a new rugged one-piece molded Phenolic case that provides better insulation and makes wiring easier. Mechanism slips out of case exposing terminals with removal of mounting nut. 6 Amp, "T" rated, 125 volts. Underwriters' Laboratories Inspected.

Send now for Catalog No. 49-A

McGILL® electrical specialties

McGILL MANUFACTURING CO., INC. 151 N. CAMPBELL ST. VALPARAISO, INDIANA

▲ For more details circle NED-238 E3 on enclosed inquiry slip ▲

standardize on standard

UNBRAKO® button head SOCKET SCREWS where countersinking isn't practical

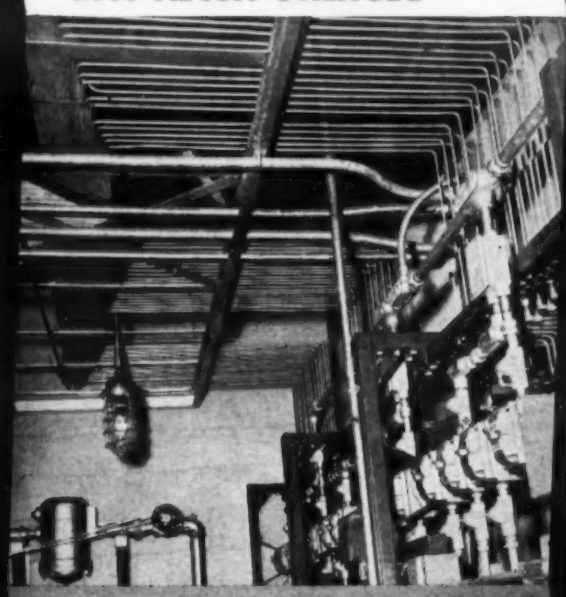
Heat treated alloy steel gives them greater strength. Hex socket minimizes danger of marred or mutilated heads even when the screws are used again and again. Low head height streamlines designs. Stocked and sold by leading industrial distributors everywhere. Write for UNBRAKO Standards. • SPS, Jenkintown 24, Pa.

Our Fiftieth Year : A START FOR THE FUTURE

UNBRAKO SOCKET SCREW DIVISION SPS JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-239 E3 on enclosed inquiry slip ▲

Here's how El Dorado Refining Company uses ALCOA UTILITUBE



AIR LINES serving instruments at El Dorado Refinery, El Dorado, Kansas. Exposed to typical refinery vapors, 9,000 feet of corrosion-resistant Alcoa Utilitube* were required for this installation. Air, dried by Alcoa *Activated** Alumina, operates at 110° F and 110 psig.

ALCOA UTILITUBE is the lowest cost corrosion-resistant tube you can buy—up to 40 per cent less than other corrosion-resistant metals!

ALCOA UTILITUBE is versatile. Use it for air for pneumatic and hydraulic control circuits and brake lines—gasoline and fuel oil for internal combustion engines—lubricating oils for engines and machines—fluids for hydraulic systems.

ALCOA UTILITUBE stands up well under vibration and also forms and flares easily.

ALCOA UTILITUBE and fittings are available from your aluminum distributor. Look for his name in your classified phone directory. Write for the new booklet: "Alcoa Utilitube."

ALUMINUM COMPANY OF AMERICA
1002-E Alcoa Building, Pittsburgh 19, Pa.

*Registered Trademark, Aluminum Co. of America

Alcoa Aluminum ALCOA

ALUMINUM COMPANY OF AMERICA

▲ For more details circle NED-240 E3 on enclosed inquiry slip ▲

Protects AIR TOOLS AND EQUIPMENT

against rust, scale and condensation in the air line ...provides constant lubrication

The Keller Lubricator-Filter operates automatically when air tools or equipment are in operation. Filter removes moisture as well as solids—easily cleaned by opening drain cock at bottom. Oil feeds from the lubricator through an upright wick—no flooding or waste when tools are not in use.

Transparent bowls show when filter needs draining, or when light spindle oil should be added to lubricator. Write for descriptive Bulletin #65-5.

Send for illustrated descriptive bulletin and detailed information

Keller Tool Company
GRAND HAVEN, MICHIGAN

▲ For more details circle NED-241 E3 on enclosed inquiry slip ▲

QUICK ACTION ON ANY ORDER

Ex-Cell-O Carries 300,000 Drill Jig Bushings in Stock

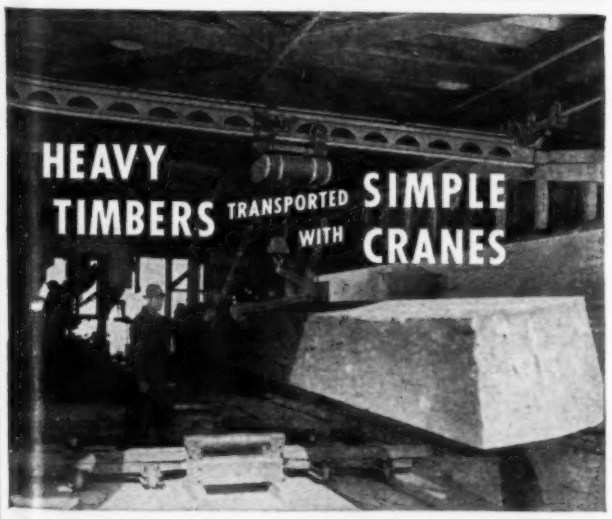
In addition to accuracy and long life, you get fast delivery on any order of any size when you specify Ex-Cell-O Drill Jig Bushings. That is because Ex-Cell-O stocks more than 300,000 bushings—one of the largest and most varied supplies in the world. For list of standard styles and sizes quickly available, write today for your free copy of Ex-Cell-O Bulletin 35371.

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

XLO

53-23

▲ For more details circle NED-242 E3 on enclosed inquiry slip ▲



Often as many as six men are required to handle a heavy timber through a saw by ordinary handling methods.

One lumber company was able to transfer 12 men to other important duties by installing four Cleveland Tramrail Cranes with electric hoists. Three men can now handle the huge timbers easily and safely.

GET THIS BOOK!
BOOK No. 2008
Packed with valuable information...

CLEVELAND TRAMRAIL ENGINEERING AND APPLICATION DATA BOOK 2008

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6617 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

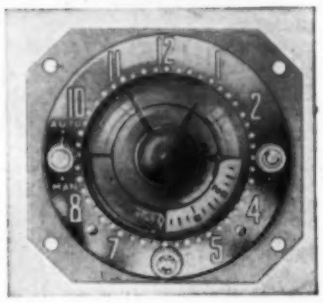
▲ For more details circle NED-243 E3 on enclosed inquiry slip ▲

GRANITE SURFACE PLATE supplied in hardwood carrying case

Designed to meet the needs of those who desire extreme accuracy and, at the same time, require the convenience of a plate that can be carried from job to job, this granite surface plate is the latest addition to the Velsey line. It is 8 x 12 x 2½ in., is of four-lip design and has overall surface accuracy of 0.000025-in. Available either in black or red granite. Made by the **Elkro Co.**, 738 Albany St., Dayton 8, O.

▲ For more details circle NED-244 E3 on enclosed inquiry slip ▲

RANGE TIMER can be mounted in any position



An erasing dial which gives a clear and exact indication of remaining time is feature of this range timer. Device can be set for immediate "start" with "stop" later, or for both "start" and "stop" later. A total of 5¾ cooking hours is possible with a setting for operation up to 11½ hours beyond setting time. Timer can be mounted in any position. Set of switch blades for convenience outlet is provided. Made by **Haydon Mfg. Co.**, 9247 Elm St., Torrington, Conn.

▲ For more details circle NED-245 E3 on enclosed inquiry slip ▲

SCREWDRIVER HANDLE is twist and impact-proof

Resistance to torque and penetrating force has been greatly increased in Hold-E-Zee screwdrivers by use of new blade-locking method. Featured in method is precision-molded hexagonal block of tough, hard plastic which drive-fits with extremely close tolerance into hexagonal cavity in transparent insulating handle. This Lok-Blok insert also contains hexagonal cavity into which screwdriver blade is drive-fitted. Under rigid tests for impact and penetration, there was no driving of blade into handle, and resistance to handle turning was increased nearly three times. Screwdrivers are made by **Upson Bros. Inc.**, 67 Broad St., Rochester 14, N. Y.

▲ For more details circle NED-246 E3 on enclosed inquiry slip ▲

Cooling Control

For INJECTION MOLDS

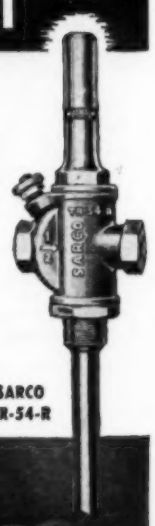
Shown here is one of 5 injection molding machines at The Jamison Plastic Corporation, Freeport, N. Y., each equipped with 2

SARCO TEMPERATURE REGULATORS Self-Operated type TR-54-R

they maintain desired mold temperatures by automatically regulating the flow of cooling water through the mold jacket.

Increase production—reduce rejects—save water! See Bulletin 705.

521



SARCO TR-54-R

sarco COMPANY, INC.
Represented in Principal Cities
Empire State Building, New York 1, N. Y.
SARCO CANADA, LTD., TORONTO 8, ONTARIO

▲ For more details circle NED-247 E3 on enclosed inquiry slip ▲

ALLIS-CHALMERS Combination STARTERS

a magnetic starter and a safety switch in one compact unit . . .

Starter has silver-to-silver double break contacts and non-carbonizing arc chambers. Circuit breaker gives short circuit protection, serves as disconnect switch. Available in sizes 0 to 5. Starters with fusible or nonfusible disconnecting switches are available up through size 3.

A-4046

There is an Allis-Chalmers starter for every motor need. Contact your nearby A-C representative or write for selection guide 14B7733, Allis-Chalmers, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS A-C

▲ For more details circle NED-248 E3 on enclosed inquiry slip ▲

LOOK JOE!...

NO MORE ROUGH, JAGGED OPENINGS in CONCRETE FLOORS ...SAVE Up to 50% with a ..... Clipper CONSAW

Save up to 50% in labor and material. Saw repair patches—saw gas, water, sewer and air line trenches in floors, runways and streets. Stops cracking and spalling—stops high maintenance costs.

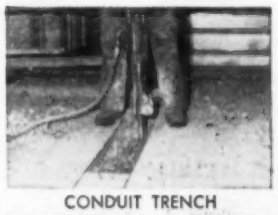
It's Yours on...
FREE TRIAL

Discover how Clipper will increase profits by decreasing maintenance costs. "On the Job" FREE TRIAL guarantees you satisfaction at *no obligation!*

MODEL C-130 ONE OF 5 MODELS GAS OR ELECTRIC POWERED

OUR ONLY BUSINESS FOR NEARLY 20 YEARS . . . MASONRY AND CONCRETE SAWING!

The unqualified Clipper guarantee of satisfaction is backed by world-wide experience, the ability to select the finest materials, and the "know-how" to put them together.



CONDUIT TRENCH

MACHINERY BASE

CLIPPER SUPERIOR DIAMOND BLADES

...guaranteed to..."Consistently Provide the fastest cut...at the lowest cost...with the greatest ease!" Clipper alone can supply every necessary metal bond...in over 36 specifications.

SAME DAY SERVICE FROM YOUR NEAREST FACTORY BRANCH —SEE BELOW

Clipper MANUFACTURING CO. NATION-WIDE DIRECT FACTORY SERVICE

- CINCINNATI
- BOSTON
- WASHINGTON, D. C.
- CHARLOTTE, N. C.
- PHILADELPHIA
- CLEVELAND
- ST. LOUIS
- CHICAGO
- HOUSTON
- AUSTIN, TEXAS
- SAN FRANCISCO
- ATLANTA
- DETROIT
- PITTSBURGH
- NEW YORK
- BIRMINGHAM, ALA.
- LOS ANGELES
- INDIANAPOLIS
- ST. PAUL
- MILWAUKEE
- DALLAS

IN CANADA — P.O. BOX 476, WINDSOR, ONTARIO

CLIPPER . . . the World's FIRST MASONRY SAW

Every shape and size refractory **cut in seconds!** Perfect fitting reline jobs that last longer—cost less. A Clipper Model to fit any job—any budget. SOLD on FREE TRIAL!

MODEL H9

15 MODELS PRICED FROM $265

TEAR OUT AND MAIL!

CLIPPER MANUFACTURING CO.
SUITE 401, 2800 N. WARWICK, KANSAS CITY, MO.
Send FREE Literature and Prices on:
☐ CLIPPER CONSAWS ☐ CONSAW DEMONSTRATION
☐ CLIPPER MASONRY SAWS ☐ CLIPPER DIAMOND BLADES
No. 16-CI
COMPANY _____
ADDRESS _____
CITY _____ STATE _____

▲ For more details circle NED-249 E3 on enclosed inquiry slip ▲

Now . . . a light-weight CHAIN-SAW

for heavy-duty sawing!

only $99.50

ONE MAN does heavy-duty sawing with the new PORTER-CABLE Model 110 . . . lowest priced electric chain saw on the market! Compact, light (only 18 lbs.) . . . yet PULLS ITSELF into heavy cuts rapidly, smoothly. Quickly pays for itself in hours saved!

Work-gripping teeth and chain action give top cutting efficiency with least effort. No dangerous jump or kick-back. Oregon® Chipper Chain is finest made. Hard-chromed edges stay sharp twice as long. Powerful 115 V. Universal motor operates on standard AC or DC outlet.

Two portable generators, AC or DC, also available.

Send for Full Details today

PORTER-CABLE Machine Company
1405 N. Salina Street, Syracuse 8, N. Y.
Manufacturers of Speedmatic and Guild Electric Tools
In Canada write: Strongridge, Ltd., London, Ont.

▲ For more details circle **NED-250 E3** on enclosed inquiry slip ▲

top-drawer

SECRET!

for quick fastener supply

CAMCAR

UP-TO-THE-MINUTE

STOCK LIST

Continuous Inventory of

AN NAS CT SCREWS • PHILIPS HEAD • INDENTED HEX HEAD • SHEET METAL SEMS • STANDARDS • SPECIALS

Steel, Brass, Stainless, Aluminum

For Prompt Shipment

Assembly line fastener supply — right in your top desk drawer. That's what Camcar Stock List Service gives you twice monthly.

Use this Stock List for quick service on your Fastener Supply Problems. Request on Your Letterhead Will Bring Regular Mailing.

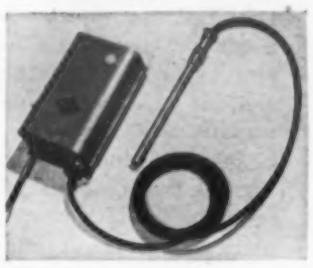
Telephone 5-9451
Teletype RK-8653

CAMCAR SCREW & MFG. CORP.
608 EIGHTEENTH AVENUE, ROCKFORD, ILLINOIS

"PRODUCTION-DESIGNED FOR YOUR ASSEMBLY LINE"

▲ For more details circle **NED-251 E3** on enclosed inquiry slip ▲

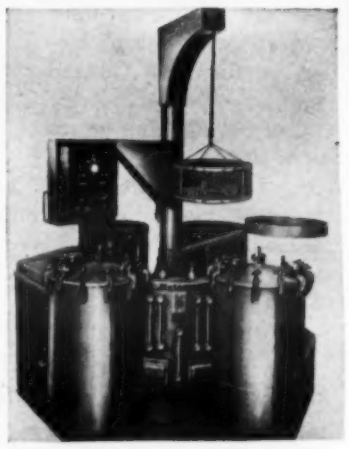
LIQUID LEVEL CONTROL device operates electronically



Adjustment of liquid level and cut-in, cut-out differential over very wide limits is provided by the Belmont level control. Operation is based on the capacitive action of liquid surrounding an electrode. Unit consists of probe mounted at location of the controlled liquid, a connecting cable that can be 1000 ft long, and a control unit. Two main controls (liquid level and differential) are designed for screwdriver adjustment, while a vernier or fine control on liquid level is operated by panel-front knob. Standard units operate on 115 v 60 cycle current, with special units available for 230 or 25 cycle operation. Differential range varies with type of service. Made by **Thermo Instruments Co.**, 1117 El Camino Real, Belmont, Calif.

▲ For more details circle **NED-252 E3** on enclosed inquiry slip ▲

CASTINGS IMPREGNATION SYSTEM uses resin sealant which achieves 100 per cent filling of micropores



Mechanized impregnation of batch metal castings is achieved with this Metaseal system, the heart of which is self-contained unit comprising autoclaves, high-vacuum pump, thermostatically controlled wash tanks, mechanical surging unit and power operated hoist. Designed for one-man operation, machine is built around center hub unit which contains the activating hub cylinders. Hub mechanizes all functions from basket loading through vacuum-pressure cycle and cleaning surge.

Metaseal 19V5 impregnant used in process is resin in monomer form which flows into pores under vacuum and pressure, filling them completely. Casting is heated and resin polymerizes into hard, infusible material. Impregnant is stable with all alloys, including copper-base materials and resists wide range of acids, alkalies, solvents and chemicals. A good bonding agent as well, it provides high corrosion resistance for all metals.

Process has been used successfully to impregnate both bronze and stainless chemical pump castings and is especially effective for magnesium castings. Machine and sealant developed by **American Metaseal Mfg. Corp.**, Dept. NED, 30 E. 60 St., New York 22, N. Y.

▲ For more details circle **NED-253 E3** on enclosed inquiry slip ▲

TO GEAR MANUFACTURERS *Exclusively*

if you produce precision gears of 6" outside diameter or less your files should certainly contain full data on the HAMILTON® Precision Gear Hobber, the machine of exclusive extras.

EXTRA—Hob spindle speeds.

EXTRA—Hob spindle speed ranges.

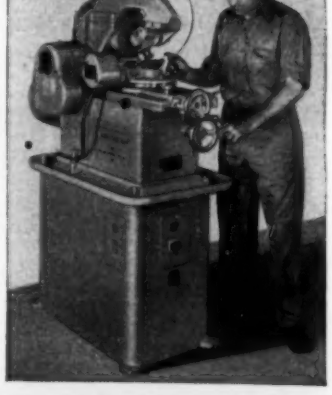
EXTRA—Accuracy of work and hob spindles (to within .0002").

EXTRA—Rigidity, for maintenance of accuracy.

EXTRA—*Independent* selection of speed, feed, indexing.

EXTRA—Maximum accumulative error of .0002".

EXTRA—Speedy set-up and operation, extra flexibility.



Get the complete story. Write for FREE Bulletin GH-5312.

THE *Hamilton* TOOL COMPANY
901 HANOVER STREET • HAMILTON, OHIO • U • S • A

▲ For more details circle **NED-254 E3** on enclosed inquiry slip ▲

to make NOISE SURVEYS

Accurately
Conveniently
Simply

The GR Type 1555-A Sound-Survey Meter is a pocket size, inexpensive, accurate and reliable sound level meter, with which noise surveys can be made by anyone.

Its range is 40 db to 136 db above the standard reference level; its accuracy is essentially within the tolerances of the A.S.A. It has proven invaluable to acoustical engineers, sales engineers and consultants needing a really compact and portable instrument for preliminary noise studies and surveys.

PRICE: $125.00

Write for the SOUND SURVEY BULLETIN

GENERAL RADIO Company 275 Massachusetts Ave. Cambridge 39, Mass.
90 West St. NEW YORK 6 *920 South Michigan Ave.* CHICAGO 5
1000 North Seward St. LOS ANGELES 38

▲ For more details circle **NED-255 E3** on enclosed inquiry slip ▲

Don't be surprised

. . . if the **Hydro*Lectric*** Lift Truck makes savings of 50 to 80% in your material handling.

HERE'S WHY . . .

HYDROLECTRIC is easier to operate because of its finger-tip control that is simplicity at its best.

HYDROLECTRIC does the job safely and quickly with its exclusive Dyna-Dual Power Unit that is quiet, odorless, powerful, rugged, and maintenance is practically nil.

HYDROLECTRIC costs less to operate than any other leading truck, and industry after industry has proved that it pays for itself in 3 months.

Want proof? Write for complete information.

LIFT TRUCKS INCORPORATED
2423-31 SPRING GROVE AVE
CINCINNATI 14, OHIO

Over 1000 models and sizes

HYDROLECTRIC, HYDROMATIC and RED ARROW LIFT TRUCKS

▲ For more details circle **NED-256 E3** on enclosed inquiry slip ▲

GET THOSE WEED ROOTS!

GO TO THE ROOT OF YOUR WEED PROBLEM WITH THESE DOLGE PRODUCTS

To keep weeds off drives, walks, parking lots, tennis courts, sand traps you've got to finish the roots.

DOLGE SS WEED-KILLER does that—and more. It kills the foliage, of course. It works down deep. It tends to sterilize the soil so that wind-blown seeds cannot sprout in it. Diluted as directed, it can kill the toughest weeds. Spray or sprinkle where you want no growth whatsoever.

E. W. T. is the Dolge 2,4-D **Selective** Weed-Killer. It finishes dandelions, plantain and other broad-leaved weeds in turf—does not harm good lawn grasses. It translocates; is absorbed and travels through the sap to the roots.

See your Dolge Service Man—he will call soon.

Write for the Dolge booklet on chemical weed control.

FOR FREE SANITARY SURVEY of your premises consult your DOLGE SERVICE MAN

Dependable DOLGE
WESTPORT, CONNECTICUT

▲ For more details circle **NED-257 E3** on enclosed inquiry slip ▲

How to solve
39 PRODUCTION PROBLEMS
with Mead Air Devices

Ready!

SEE how to use standard Mead units to make automatic or semi-automatic machines!
New 16-page Mead PHOTO-BOOKLET presents actual examples in pictures and text of 39 different, typical production problems solved by various combinations of Mead Air Operated Devices. Alert production men will readily adapt the ideas to their own needs. This interesting booklet shows how. Write today for booklet "Air Power at Work".

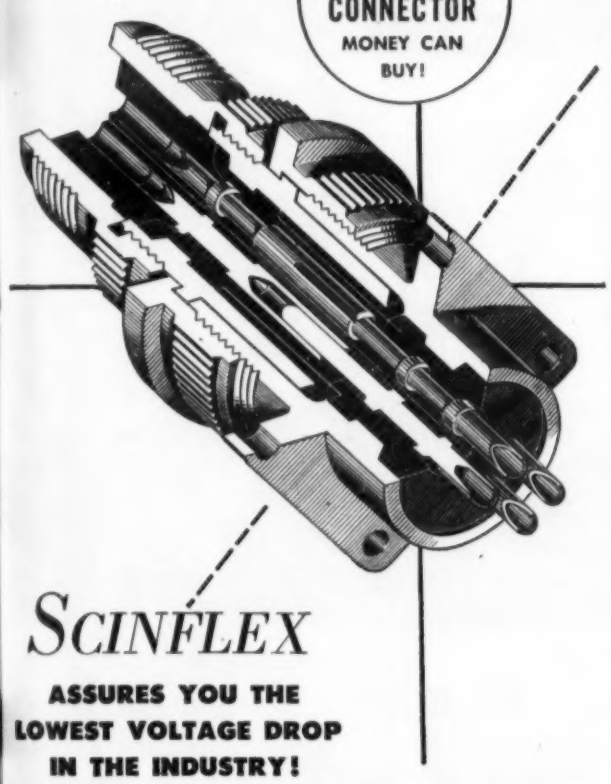
MEAD AIR OPERATED DEVICES

Write for NEW "BOOKLET 39" Now!

MEAD SPECIALTIES CO., Dept. N-53-A, 4114 N. Knox Ave., Chicago 41, Ill.

▲ For more details circle NED-258 E3 on enclosed inquiry slip ▲

The Finest ELECTRICAL CONNECTOR MONEY CAN BUY!



SCINFLEX

ASSURES YOU THE LOWEST VOLTAGE DROP IN THE INDUSTRY!

When operating conditions demand an electrical connector that will stand up under the most rugged requirements, always choose Bendix Scinflex Electrical Connectors. The insert material, an exclusive Bendix development, is one of our contributions to the electrical connector industry. The dielectric strength remains well above requirements within the temperature range of −67°F to +275°F. It makes possible a design increasing resistance to flashover and creepage. It withstands maximum conditions of current and voltage without breakdown. But that is only part of the story. It's also the reason why they are vibration-proof and moisture-proof. So, naturally, it pays to specify Bendix Scinflex Connectors and get this extra protection. Our sales department will be glad to furnish complete information on request.

• Moisture-Proof • Radio Quiet • Single Piece Inserts • Vibration-Proof • Light Weight • High Insulation Resistance • High Resistance to Fuels and Oils • Fungus Resistant • Easy Assembly and Disassembly • Fewer Parts than any other Connector • No additional solder required.

BENDIX SCINFLEX ELECTRICAL CONNECTORS

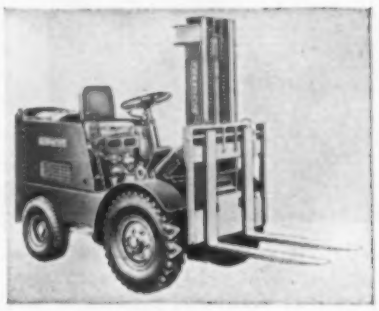
Bendix

SCINTILLA MAGNETO DIVISION of Bendix AVIATION CORPORATION
SIDNEY, NEW YORK

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.
FACTORY BRANCH OFFICES: 118 E. Providencia Ave., Burbank, Calif. • Stephenson Bldg., 6560 Cass Ave., Detroit 2, Michigan • Brouwer Bldg., 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • 582 Market Street, San Francisco 4, California

▲ For more details circle NED-259 E3 on enclosed inquiry slip ▲

LIFT TRUCK DIFFERENTIAL drives both wheels at all times



In addition to maintaining equal-drive wheel speeds, this differential, available as original equipment at extra cost on Towmotor LT-60 lift trucks, compensates for differences in wheel speeds when turning in either direction. It is useful for lift truck scooping operations where maximum traction is necessary, and in transporting materials over mud, sand, soft earth, ice or snow. Made by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

▲ For more details circle NED-260 E3 on enclosed inquiry slip ▲

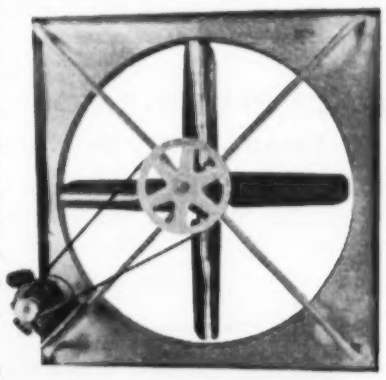
MAGNESIUM HAND TRUCK 18-lb unit has 500 lb capacity

Suited for general factory, warehouse and loading dock use, the Magcoa magnesium hand truck has capacity of over 500 lb. It weighs only 18 lb, one-fourth to one-third that of hand trucks made of other materials with comparable capacities. Truck's all-bolted construction facilitates replacement of parts. Made by **Magnesium Co. of America**, 5222 Indianapolis Blvd., East Chicago 19, Ind.

▲ For more details circle NED-261 E3 on enclosed inquiry slip ▲

INDUSTRIAL EXHAUST FANS mount horizontally or vertically

Complete ball-bearing construction of model IC heavy duty industrial exhaust fans allows units to be mounted either horizontally or vertically. Fans range in diameter from 24 to 48 in., are belt driven by motors ranging from ½ to 1½ hp and have free air deliveries from 6025 to 21,950 cfm. Units up to 36-in. diameter and 1 hp have three blades while larger fans feature four blades. Overall dimensions range from 32 x 32 in. to 56 x 56 in. Units are available for operation on either 115/230-v single phase 60-cycle or 220/440-v three-phase 60-cycle current. Made by **Dana Fan & Blower Corp.**, 1300 Brashears St., Cincinnati 23, O.



▲ For more details circle NED-262 E3 on enclosed inquiry slip ▲

IS RUST EATING AWAY YOUR PARTS INVENTORY?

Then you Need MARVELLUM VPI® WRAP

Paper coated with a Volatile Corrosion Inhibitor

Avoid the damages of destructive rust, the loss of time and money spent in refinishing inventory parts, the mess and bother of slushing and cleaning. Wrap your parts — or merely line your bins — with economical Marvellum VPI.

VPI is a paper coated with a new chemical which slowly vaporizes, forming an invisible protective film that prevents corrosion. Used as a wrap it keeps rust away for years. Used as a liner it gives you many months of trouble-free storage. Developed during the war as a protective wrap for shipment of steel and aluminum parts, many companies are also using it to protect their inventories or as a lining for tote boxes on the production floor.

Marvellum VPI is available in sheets, envelopes or special containers. Marvellum has complete facilities under one roof for designing, producing and coating VPI Wraps. Also makers of a wide range of other barrier materials to meet your needs for product protection. Distributors in all major cities.

Get all the facts. Write for FREE BOOKLET.

The Marvellum Company
34 APPLETON STREET HOLYOKE, MASS.
First and Foremost in VPI Protection

▲ For more details circle NED-263 E3 on enclosed inquiry slip ▲

MEMO: Specify Cambridge Fabrications for—

DIPPING
Baskets, crates or racks for bulk cleaning, pickling or chemical treatment in any metal or alloy . . . single units or in quantity. Let us quote on your needs.

HEAT TREATING
Cambridge units for brazing, annealing, sintering and other heat treating processes have been used for years throughout industry. Our familiarity with heat treating operations assures your complete satisfaction with the units we build for you.

HANDLING
Let us go to work on your special materials handling fixtures. Send prints for quotation, or simply tell us the job you want done and our own engineers will develop designs for your approval.

HERE'S THE FULL STORY, FREE!

The Cambridge Wire Cloth Company
DEPARTMENT C
CAMBRIDGE 5, MARYLAND

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

84 page catalog describes Cambridge facilities for fabricating special metal assemblies. Also contains useful metallurgical data. Write for your copy today.

Offices in Leading Industrial Cities
See "Baskets-Wire" in your classified telephone directory.

▲ For more details circle NED-264 E3 on enclosed inquiry slip ▲

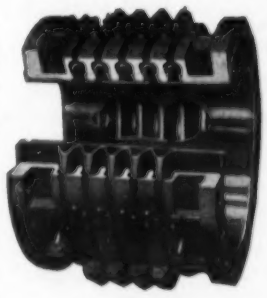
• Zallea
• DUO-EQUALIZING Expansion Joints

. . . find excellent application in all types of intermittent service steam lines, and in other piping systems subject to frequent temperature changes.

Pantographic chains superimposed on the equalizing rings distribute expansion and contraction equally among all corrugations. In this manner, all the equalizing rings move the same distance at the same time.

Zallea Duo-Equalizing Expansion Joints may be used for pressures up to 300 psi and temperatures up to 1600° F.

For further information on this and other Zallea Expansion Joints, write today for a copy of Bulletin 351. Zallea Brothers, 818 Locust Street, Wilmington 99, Delaware.



Zallea

▲ For more details circle NED-265 E3 on enclosed inquiry slip ▲

TEMPILSTIKS°

the amazing Crayons that tell temperatures

in
WELDING
FLAME-CUTTING
TEMPERING
FORGING
CASTING
MOLDING
DRAWING
STRAIGHTENING
HEAT-TREATING
IN GENERAL

$2 each

gives up to 2000 readings

it's this simple:
• Select the Tempilstik° for your working temperature.
• Mark your workpiece with it.
• The Tempilstik° will leave a liquid mark as soon as its specified temperature is reached.

Available in these temperatures (°F)

113	213	313	450	850	1250	1650
125	225	325	500	900	1300	1700
138	238	338	550	950	1350	1750
150	250	350	600	1000	1400	1800
163	263	363	650	1050	1450	1850
175	275	375	700	1100	1500	1900
188	288	388	750	1150	1550	1950
200	300	400	800	1200	1600	2000

Also available in pellet and liquid form.

TEMPIL CORPORATION
11 West 25th St., New York 10, N. Y.

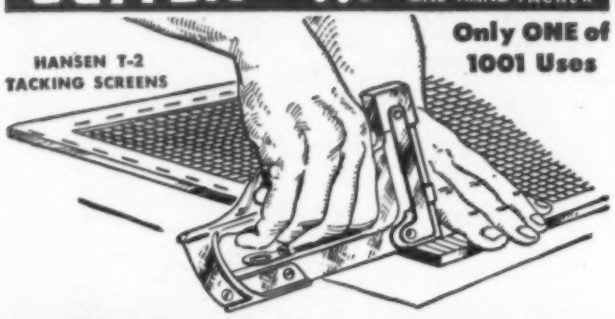
FREE—Tempil° "Basic Guide to Ferrous Metallurgy" —16¼" by 21" plastic-laminated wall chart in color. Send for sample pellets, stating temperature of interest to you.

NAME _____
COMPANY _____
ADDRESS _____

Booth 125 Welding & Industry Exp. Houston, Texas

▲ For more details circle NED-266 E3 on enclosed inquiry slip ▲

YOU CAN DO IT BETTER with HANSEN ONE-HAND TACKER



FASTER! Screen Tacking is illustrated merely to show the *versatility* of the Hansen Tacker. It is adaptable to a wide variety of uses . . . saves *time, steps, materials!*

BETTER! With Hansen you place the Tacker accurately in driving position . . . exactly where you want it. Grip the handle. The Tacker drives the staple with precision and accuracy. Powerful action drives each staple securely.

AT LESS COST! Portable . . . self-contained . . . easy to operate . . . balanced design . . . removable Take-up Jaw . . . are Hansen features that cut costs.

(Model T-3-4 Hansen Tacker)

36 MODELS
80 STAPLE SIZES

Request Booklet . . . today

A.L. HANSEN MFG. CO.
5164 RAVENSWOOD AVE., CHICAGO 40, ILL.

For more details circle NED-268 E3 on enclosed inquiry slip

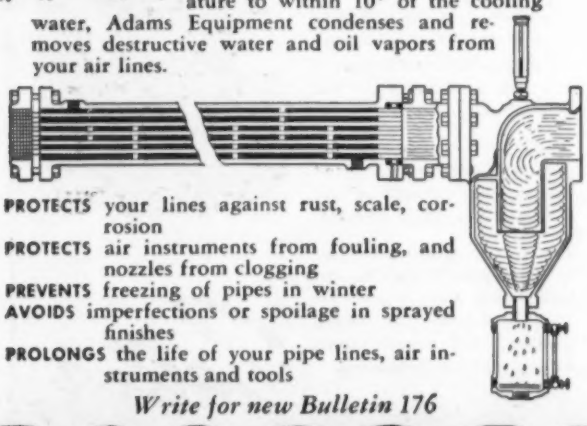
You Can be Sure of Clean Dry Air for your Compressed Air Tools

3500 Gallons

1 YEAR'S water extraction from air lines equipped with Adams Aftercooler and Cyclone Separator.

with ADAMS Aftercooler and Cyclone Separator

● Reducing compressed air temperature to within 10° of the cooling water, Adams Equipment condenses and removes destructive water and oil vapors from your air lines.



PROTECTS your lines against rust, scale, corrosion
PROTECTS air instruments from fouling, and nozzles from clogging
PREVENTS freezing of pipes in winter
AVOIDS imperfections or spoilage in sprayed finishes
PROLONGS the life of your pipe lines, air instruments and tools

Write for new Bulletin 176

R.P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

For more details circle NED-269 E3 on enclosed inquiry slip

TO REACH HIGH PLACES SAFELY. . .

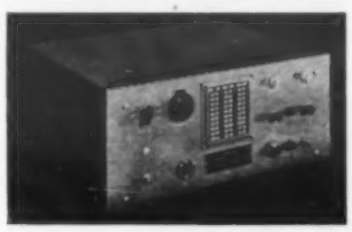
This illustrated folder describes the complete line of Ballymore ladders that are saving time and money and increasing capacity of storage space in business and industry. Send for your free copy today.

BALLYMORE COMPANY
WAYNE 3, PENNSYLVANIA

Name_____
Company_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-270 E3 on enclosed inquiry slip

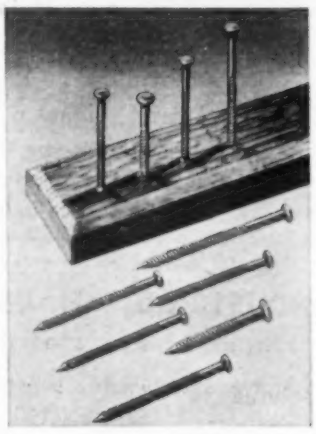
ANALOG VOLTAGE DIGITIZER
accurate to 0.1 per cent of scale



Analog voltages are automatically converted into decimal digits with an accuracy of 0.1 per cent (1000 counts full scale) by type 24A Teleducer. Instrument operates upon demand, digitizes an input voltage and holds the representation for controlled period of time for purposes of display, recording or any readout form. Output can be recorded by means of punched cards, electric typewriter, magnetic tape or punched tape. Instrument digitizes low voltage without direct current amplification and high voltage by means of attenuators. It uses simple-bridge balancing circuit which does not hunt or oscillate and requires only 0.8-second or less to reach balance. Made by **Telecomputing Corp.**, Engineering Dept. UTN, 133 E. Santa Anita Ave., Burbank, Calif.

For more details circle NED-271 E3 on enclosed inquiry slip

SCREW-SHANK NAILS
for permanent wood fastening

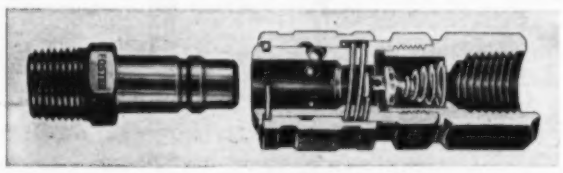


Used for permanence in wood fastening, Gripper screw-shank nails have up to 60 per cent more holding power than bright or coated nails. Typical uses are in constructing pallets, shipping crates and hardwood floors. They are available in sizes ranging from 6-penny to 7-gage, up to 3½ in. long and up to 2⅛ in. maximum thread. Thread is buttress type, square on top. Made by **Pittsburgh Steel Co.**, 1403 Grant Bldg., Pittsburgh 30, Pa.

For more details circle NED-272 E3 on enclosed inquiry slip

QUICK PRESSURE COUPLINGS
three size ranges for all applications

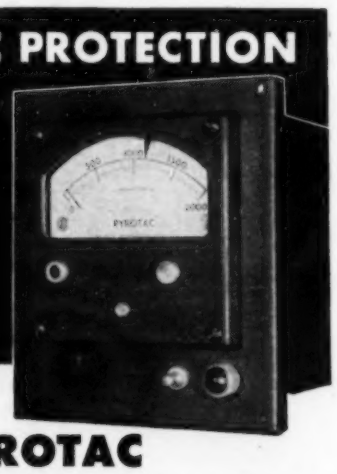
Three size groupings of quick couplings for pneumatic and hydraulic tools and lines are available. Capacities for air range from 30 to 116 cfm and



for fluid from 6 to 17 gpm at 100 psi. Made by **Foster Mfg. Co.**, 2850 Gravois, St. Louis 18, Mo.

For more details circle NED-273 E3 on enclosed inquiry slip

AUTOMATIC PROTECTION OR CONTROL for your heating process



. . . WITH
ALNOR PYROTAC

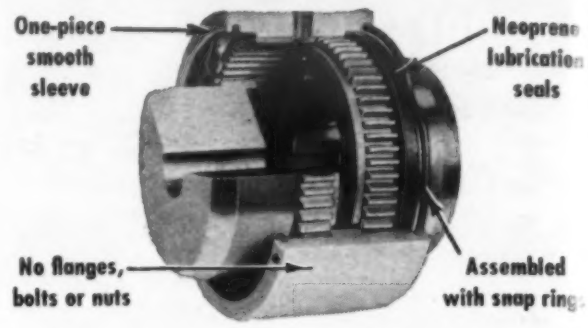
Here's a simple, low-cost way to obtain *AUTOMATIC PROTECTION* against damage due to excessive temperatures . . . safeguard your investment in heating equipment and materials in process. This precision-built instrument constantly indicates temperature of the heated equipment and sounds an alarm and/or shuts down the heated circuit at a safe, pre-set temperature. It may also be used as a *CONTROLLER* on a process requiring shutdown upon reaching a final process temperature—such as ceramic kilns, molds, etc. Automatic thermocouple break protection assures safety if couple or extension wires should break.

Ask your Alnor representative for details on this sturdy, precise instrument. You'll find the price of less than a hundred dollars unusual for an instrument of this type. Write for bulletin that contains complete description and wiring diagrams of actual applications. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-274 E3 on enclosed inquiry slip

GEAR COUPLING—
simplified design cuts costs

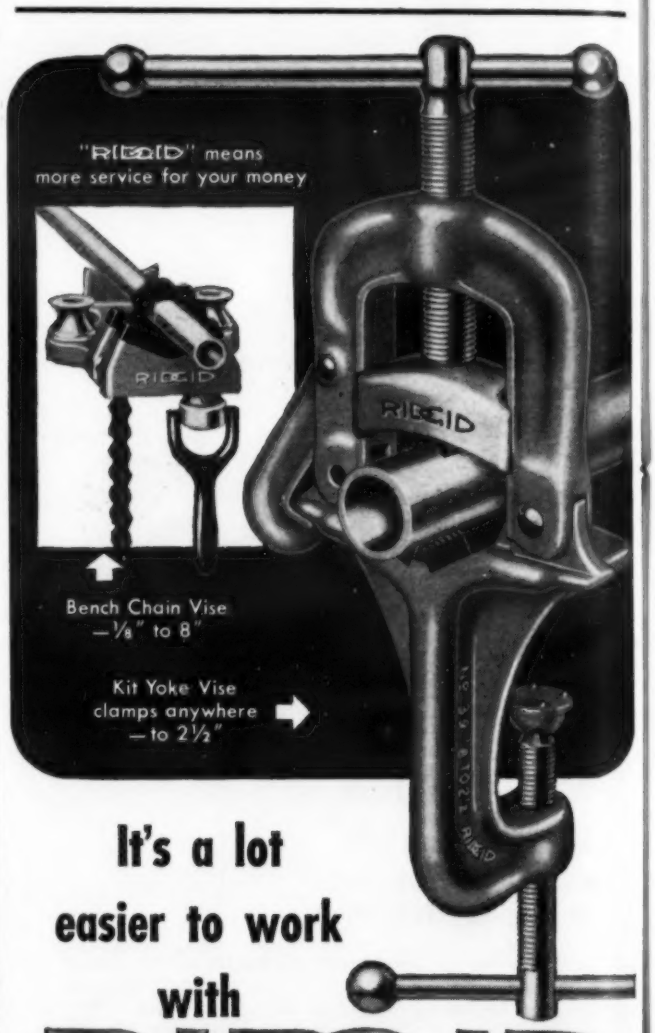


Sier-Bath Flexible Gear Couplings have only 7 parts, average 3/5 the size and ½ the weight of conventional types, are assembled and uncoupled in seconds. Resulting advantages: allow more compact designs, cut assembly costs, reduce down-time, cut wear on shafts, bearings, armatures. Standard, Mill Motor, Vertical, Floating Shaft and Spacer Types, sizes ⅞ to 6, HP 4 to 600 per 100 RPM. Special types and sizes to order. New 16-page Catalog on request.

***Sier-Bath* GEAR and PUMP CO., Inc.**
9240 Hudson Blvd., North Bergen, N. J.

Founded 1905—Also mfrs. of Precision Gears and Rotary Pumps—Member A.G.M.A.

For more details circle NED-275 E3 on enclosed inquiry slip



It's a lot easier to work with RIDGID

Extra-Utility Pipe Vises

Compare those work-saver RIDGID Vises with any others and you see the bonus of extra utility you get for your money. Kit vise is easily toted to the job, quickly clamped on edge of bench or plank, ready for use. All other RIDGID vises have handy integral pipe benders and rests to make cutting and threading easier. Full-width firm-gripping jaws of top quality tool-steel, bodies of rugged special malleable—for years of service. 9 models, yoke and chain, 23 sizes, meet every need. Get your money's worth—buy RIDGID Vises at your Supply House.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

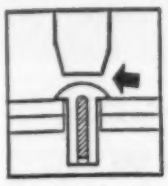
RIDGID Work-Saver Pipe Tools

For more details circle NED-276 E3 on enclosed inquiry slip

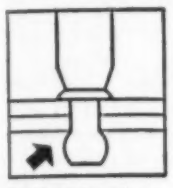
Countersunk or Brazier ...

DU PONT EXPLOSIVE RIVETS

insure easier fastening



1. Touch head of Explosive Rivet with heated Du Pont Riveting Iron. (Note tiny explosive charge in Rivet shank.)



2. Almost instantly ... charge expands, forming a barrel-shaped head on shop end of Rivet that sets it in place.

Whether your job demands 100° Countersunk or Brazier head-type ... brass, nickel or 52 S aluminum alloy ... you can rely on Du Pont Industrial Explosive Rivets to simplify fastening work. Awkward and blind riveting is no problem with these one-piece fasteners. You set 20 to 25 Explosive Rivets a minute with no after-finishing. And *one* man does the *whole* job without bucking bar or special tools. Send for booklet picturing how Explosive Rivets simplify many kinds of fastening operations. *Contact nearest* Du Pont Refinish Service Warehouse, or write: E. I. du Pont de Nemours & Co. (Inc.), Explosives Dept., Wilmington 98, Del.

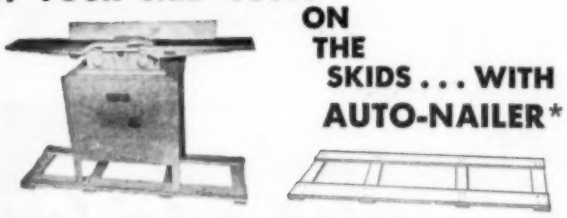
DU PONT *Hi-Speed*
INDUSTRIAL EXPLOSIVE RIVETS

A Product of Du Pont Explosives Research

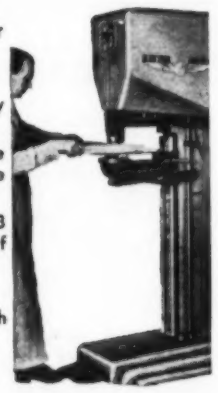
DU PONT — Better Things for Better Living ... through Chemistry

▲ For more details circle NED-277 E3 on enclosed inquiry slip ▲

PUT YOUR SKID COSTS ON THE SKIDS ... WITH AUTO-NAILER*



AUTO-NAILER MAKES SKIDS FASTER ... STRONGER



- 3-nails-a-second speed saves up to 75% in labor costs over hand nailing.
- More rigid skids—less racking.
- No jigs necessary — Auto-Nailer will nail any pattern.
- Auto-Nailer is flexible—changing from one size (or design) to another requires no machine adjustment.
- Auto-Nailer makes and drives its own nails—3 a second—can be clinched or bradded, if desired.
- Auto nails will not back out.
- Auto nails reduce nail cost. Use only length that's needed. None bent; none dropped.

Write for free catalog

*Trademark Registered

AUTO-NAILER CO.,
265 MARIETTA ST., ATLANTA, GEORGIA

▲ For more details circle NED-278 E3 on enclosed inquiry slip ▲

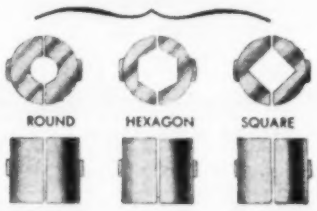
HARDINGE ELMIRA, N.Y.

Style "B"

Master Feed Fingers and Pads

Replaceable pads are interchangeable among different makes of automatics with the same capacity. Available for all sizes of the following machines up to and including 3½" capacity:

BROWN & SHARPE
CLEVELAND
CONE
DAVENPORT
GREENLEE
GRIDLEY & ACME-GRIDLEY
NATIONAL ACME
NEW BRITAIN



Each pad also furnished in Hardened Steel, Nickel Cast Iron, or Bronze to suit all materials and classes of screw machine work.

HARDINGE BROTHERS, INC., ELMIRA, N. Y.

▲ For more details circle NED-279 E3 on enclosed inquiry slip ▲

TIME SWITCH has a 24-hour dial

"On" trip and "off" trip on the 24-hour clockwise motion dial of this time switch move against on and off levers to open and close circuit being timed. A ¼-in. motion of the lever operates a heavy duty Micro Switch controlling the load circuit. Interlocking arrangement permits manual operation of levers without interfering with the sequence of automatic operations. Timer is enclosed in a 4½ x 5 x 7-in. dust-tight box. Made by **Lumenite Electronic Co.**, 403 S. Dearborn St., Chicago 5, Ill.

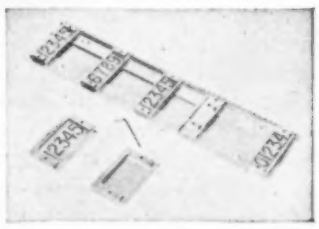
▲ For more details circle NED-280 E3 on enclosed inquiry slip ▲

PERMANENT MAGNET SEPARATOR developed for use in hoppers

Designed to remove iron contamination from free-flowing materials, this unit will perform equally well in wood or steel hoppers. It consists of a series of steel disks spaced at 1-in. centers by Alnico magnets. The disks serve as pole plates for the magnets. When in position, a magnetic barrier is provided covering the entire hopper discharge opening. Nonmagnetic particles pass freely. Tramp iron or other ferrous contamination is trapped. Periodic cleaning is the only maintenance required. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie, Pa.

▲ For more details circle NED-281 E3 on enclosed inquiry slip ▲

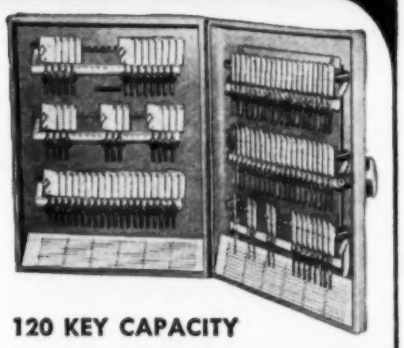
ENGRAVING COPY HOLDER saves time in engraving characters



Considerable time savings in engraving letters and numerals at right angles are possible with this sectional copy holding slide. Brass copy holder also saves time in setting up work and saves space by allowing the engraving of more characters per line. It is particularly useful in marking long bands such as terminal strips. It can be used with any model Engravograph with standard ⅝-in. or 1¼-in. blanks. Made by **New Hermes Engraving Machine Corp.**, Dept. 26, 13-19 University Pl., New York 3, N. Y.

▲ For more details circle NED-282 E3 on enclosed inquiry slip ▲

STOP HUNTING FOR KEYS



120 KEY CAPACITY

Here's real "key insurance" in a compact KE-CABINET. Made of 20 gauge cold rolled steel with suitable hardware to provide maximum key security. Equipped with numbered KE-TAGS of durable, vulcanized fibre. KE-CABINETS come in two sizes to hold 60 to 120 keys and 100 to 200 keys. The cabinet is finished in modern office grey.

For further information write
CUSHMAN & DENISON MFG. CO.
153 West 23rd St., New York 11, N. Y.

KE-CABINET

▲ For more details circle NED-283 E3 on enclosed inquiry slip ▲

RITE-HITE

ADJUSTABLE LOADING DOCKS

Speed Up Cross Dock Operations by installing RITE-HITE *Adjustable Loading Docks.*

- Make a perfect BRIDGE between truck and dock.
- Quick Fingertip Control. One man sets vertical and lateral adjustment instantly.
- Save Crew and Carrier Time.
- Provide smooth "No-Bump" travel.
- Prevent damage to material.
- Easy to install, no costly machinery, no electric or fluid controls, no piping, no lubrication.

For complete facts, sizes and capacities, write to: Dept. 14

LOOMIS MACHINE CO. • CLARE, MICH.
RITE-HITE DIVISION

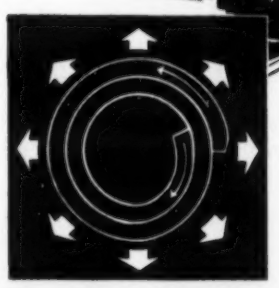
▲ For more details circle NED-284 E3 on enclosed inquiry slip ▲

SPIROL'S radial spring action fastens better!

SPIROL PIN

Does the job here—

and here too!



***Radial* SPRING ACTION MAKES SPIRAL COILS SHOCK-PROOF!**

From tiny eyeglass-hinge pivots up to ½" or larger fastenings used in locomotives, the all-around tension of spiral coils gives SPIROL PIN unique fastening properties. When compressed by insertion, SPIROL PINS develop *evenly distributed* radial spring tension — no weak "hinge" lines. This spring action locks SPIROL PIN in place — eliminates close tolerances — allows easy removal and re-use of pin. True radial flexibility permits shock-proof fastening of hard and soft materials — eliminates internal stresses in component parts. SPIROL PINS have chamfered ends for easy insertion.

FREE! Write for illustrated folder and sample SPIROL pins.

C. E. M. COMPANY
29 SCHOOL STREET • DANIELSON, CONN.

▲ For more details circle NED-285 E3 on enclosed inquiry slip ▲

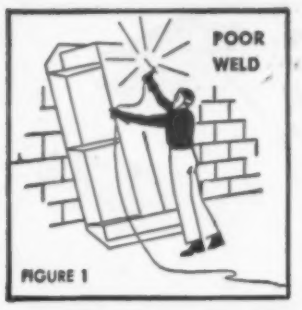


FIGURE 1

FIGURE 2

How Worthington Welding Positioners help your welders produce BETTER WELDS

When your welder has to climb over, prop, or flop the work, he's wasting time and can only obtain good downhand welding over a limited area (Figure 1). With a Worthington Welding Positioner, the work is quickly tilted or rotated automatically into position for correct downhand welding. Write for Bulletin 210D. Worthington Corporation, Plainfield, N. J.

Y.2.5

WORTHINGTON

Welding Positioners—Turning Rolls

For more details circle NED-286 E3 on enclosed inquiry slip

PRODUCTION UP
COSTS DOWN
WITH *Commander*
PRODUCTION TOOLS

Adjustable
MULTI-DRILL

- Adjustable To Any Hole Pattern
- Drill 2 to 8 Holes at 1 Stroke
- Fits Any Drill Press

MODEL 900

Increase production up to 800%—save time, cut costs. Mounted without alterations or special tools. 9" drilling area; centers to ½". Extension Spindles available to increase area to 22½". Special adaptations available.

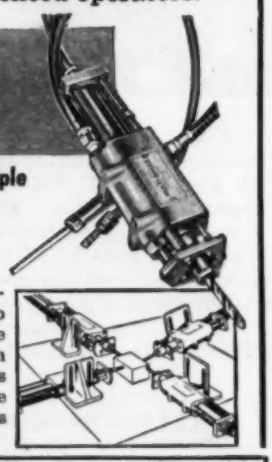
"the tapper that thinks for its operator"

Commander
TAPPER

- Wider Range . . . 1 Tapper Handles #0 to ¾" Taps
- Automatic Tap Protection
- Furnished to Fit Any Drill Press

Adjustable full range torque control instantly stops any tap when it's dull, loaded, strikes a hard spot, or bottoms in blind hole tapping. Assures maximum production, cuts rejects, even with inexperienced operators.

MULTI-ANGLE DRILL UNIT



- Quick, easy set-ups for Multiple Drilling of angle holes
- Complete Drilling Unit—Full 4" Stroke

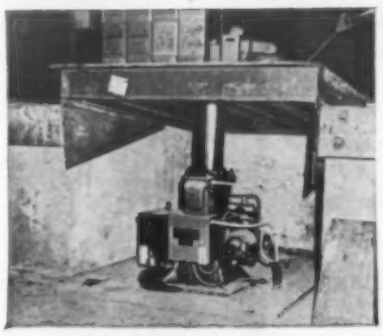
MULTI-ANGLE Drill Units provide unlimited freedom of set-up for long or short run multiple hole drilling jobs. May be mounted on fixtures, jigs or bolted to drill press table. Save time, cut costs on angle drilling. Used with any drill press or suitable power source.

Write FOR CATALOG #851 and the name of your nearby Commander Distributor

Commander MFG. CO.
4220 W. KINZIE STREET
CHICAGO 24, ILLINOIS

For more details circle NED-287 E3 on enclosed inquiry slip

HYDRAULIC LOADING RAMP
platforms vary from 5 x 6 to 6 x 8 ft



Checkered steel covered platform of type C-68 loading ramp is hinged at loading dock edge and only outer lip is moved upward and downward by hydraulic power. Unit rests on strong base plate welded to bottom of the cylinder and to which is attached electric motor-driven oil pump and oil reservoir tank. No ground excavation is needed for cylinder. When level with dock area, ramp has "roll over" load bearing capacity of 10,000 lb for smaller size and 20,000 lb for larger unit. Cross travel is thus possible. Hydraulically projectable lip which extends edge of ramp 18 in. to meet bed of truck or trailer is available. Ramp is pushbutton controlled, and can be recessed into dock or installed to project out from dock. Made by **Globe Hoist Co.,** 1002 Mermaid Lane, Philadelphia 18, Pa.

For more details circle NED-288 E3 on enclosed inquiry slip

LIFTING-STACKING MACHINE
four-wheel unit lifts 2000 lb

Pallets, skids, dies, drums, barrels and sacked goods are among items which can be handled by model HHL straddle-type Hydrolift stacker. Primarily a walkie type hoisting machine for limited area work, fork trucks can be provided with coupling for movement with small powered tractor. Features include 2000-lb capacity, power hydraulic lift, four-wheel stability and high maneuverability. Unit will stack in 5-ft aisles with no trailing high voltage wires. Made by **Lift Trucks, Inc.,** 2427 Spring Grove Ave., Cincinnati 14, O.

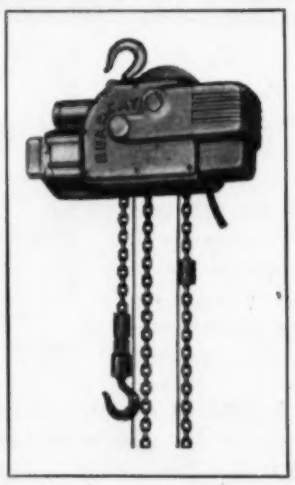
For more details circle NED-289 E3 on enclosed inquiry slip

DO YOU KNOW? More than 3000 "experts" will be on hand at the various booths of exhibitors at the fifth National Materials Handling Exposition which will be staged May 18 to 22 at Convention Hall, Philadelphia. Advance registration cards and information about the conference are obtainable from Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y.

For more details circle NED-290 E3 on enclosed inquiry slip

Check these BEARCAT features before you buy an electric hoist

- light in weight
- sturdy construction, dependable operation, long life
- main housing and covers of high tensile aluminum alloy
- precision gearing for speed reduction
- 2 brakes for maximum safety
- antifriction bearings throughout
- speeds from 6 to 50 feet per minute, capacities from 170 to 4000 pounds, depending on model and motor size



And Bearcat Hoists—with top hook suspension—are stocked by leading industrial distributors. Vertical stud or trolley suspension is also available. Consult your local classified telephone directory under "Hoists" for the name of your nearest Harrington distributor or write us for literature.

HARRINGTON PEERLESS HOISTS

THE HARRINGTON CO., 1650 W. Callowhill St., Phila. 30, Pa.

Makers of Hoists Since 1876

For more details circle NED-291 E3 on enclosed inquiry slip

Dust Respirators

GOOD, LIGHTWEIGHT, COMFORTABLE

In the "Good Old Summer Time"

A comfortable worker is a better worker! That's why these lightweight (1½ ounce) respirators are particularly welcome when temperatures soar. They do a real protective job and they're economically priced. Your nearest AO Safety Products Representative can supply you. Model numbers are R9100 and R9100T.

Recommended Uses

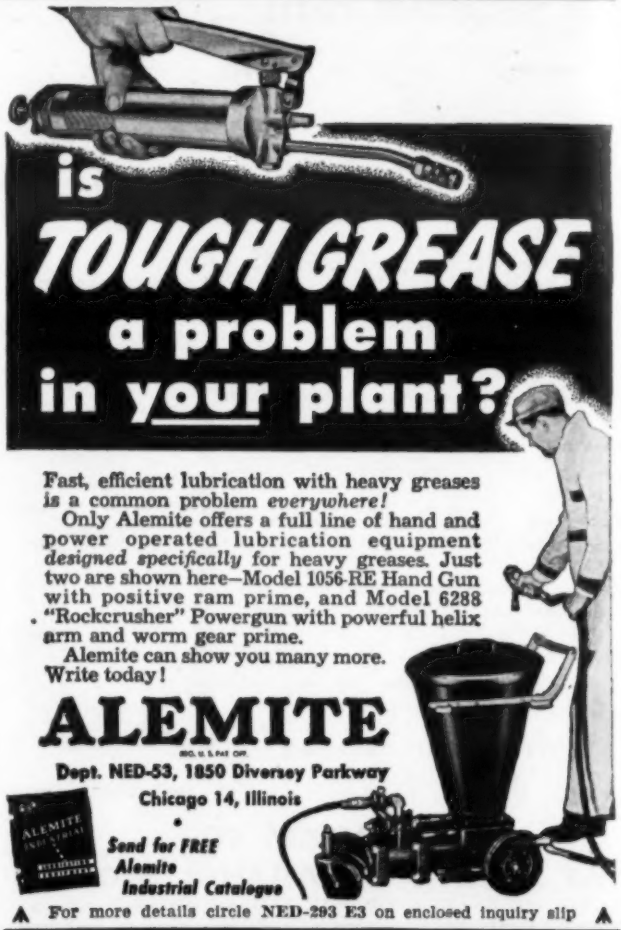
R9100 Respirator provides protection against pneumoconiosis-producing and nuisance dusts such as borax, carbon, glass, grain, graphite, cement, limestone, gypsum, coke, charcoal, wood, pollen, flour and aluminum. For toxic dusts ask for AO R9100T Respirator.

Both respirators are approved by the U. S. Bureau of Mines (R9100 — BM2137; R9100T — BM2144).

American Optical

SOUTHBRIDGE, MASSACHUSETTS • BRANCHES IN PRINCIPAL CITIES

For more details circle NED-292 E3 on enclosed inquiry slip



is TOUGH GREASE a problem in your plant?

Fast, efficient lubrication with heavy greases is a common problem *everywhere!*

Only Alemite offers a full line of hand and power operated lubrication equipment *designed specifically* for heavy greases. Just two are shown here—Model 1056-RE Hand Gun with positive ram prime, and Model 6288 "Rockcrusher" Powergun with powerful helix arm and worm gear prime.

Alemite can show you many more. Write today!

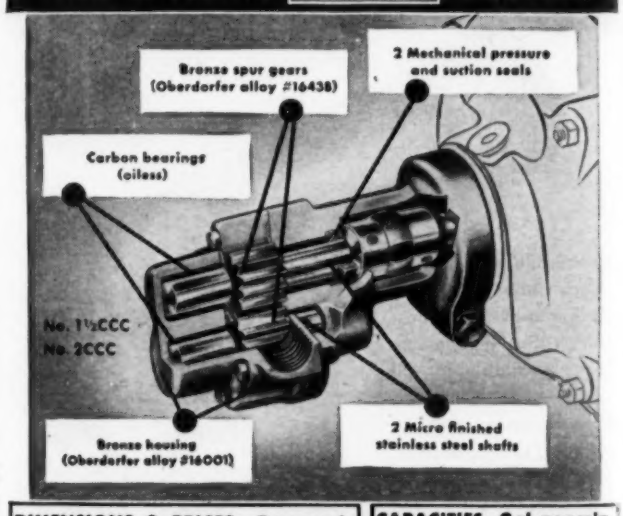
ALEMITE

Dept. NED-53, 1850 Diversey Parkway
Chicago 14, Illinois

Send for FREE Alemite Industrial Catalogue

For more details circle NED-293 E3 on enclosed inquiry slip

Two close coupled motor driven OBERDORFER BRONZE PUMPS



DIMENSIONS & PRICES—Pump only

Pump No.	Ht.	Width	Lgth.	List Price
1½CCC	2⅞"	21 1/16"	4¾"	$20.00
2 CCC	31 1/16"	2⅜"	4⅞"	22.50

Complete units with ⅓ hp. 110 volt AC thermal overload motors (motor standard, but specially machined for pump mounting). Motor price $13.50 net.

CAPACITIES—Gal. per min. 1725 rpm—lbs/sq.in.

Press.	1½ CCC	2 CCC
0 lbs.	2.00 gal.	4.00 gal.
25 lbs.	1.83 gal.	3.67 gal.
50 lbs.	1.67 gal.	3.17 gal.
75 lbs.	1.58 gal.	2.83 gal.
100 lbs.	1.50 gal.	—

See our catalog in Sweet's PRODUCT DESIGN File

Oberdorfer Foundries, Inc., Ind. Pump Div.
235 Thompson Rd. Syracuse, N. Y.

For more details circle NED-294 E3 on enclosed inquiry slip

26-year record proves DUMORE® GRINDERS give low-cost, accurate service

How DUMORE insures high-speed internal grinding with mirror finish at low cost

IN a difficult jaw grinding operation needed to manufacture drill chucks, this chuck manufacturer has used DUMORE precision grinders since 1927.

"Our Dumore No. 5 units operate 100 hrs. per week for the internal grinding of 3 open jaws for our 1/8" to 1" plain bearing key type chucks. The material is 60 Rockwell C hardness alloy steel and we remove .005".

"The Dumores are well adapted to this fine work and produce a glass-like finish. Their sturdy power transmission, solid spindle shaft, self-oiling features, air-cooled motor and variable speeds make them exceptionally well suited for this work."

To improve your internal grinding operations, investigate Dumore grinders. Get the details from your industrial distributor or write direct:

The DUMORE Company
1333 Seventeenth Street • Racine, Wisconsin

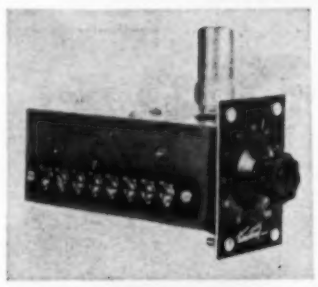
▲ For more details circle NED-295 E3 on enclosed inquiry slip ▲

PLASTIC AISLE MARKERS
now in brilliant red color

Smoking or danger areas in factories, warehouses, streets and highways can now be marked off permanently with fire - engine red Dur-O-Line plastic aisle markers. These markers, previously available only in yellow or white, are easily put down on any type floor and provide a bright permanent line that requires no further attention. Made by **Traffic Safety Supply Co.**, Dept. NE, 27th & Sandy Blvd., Portland 12, Oreg.

▲ For more details circle NED-298 E3 on enclosed inquiry slip ▲

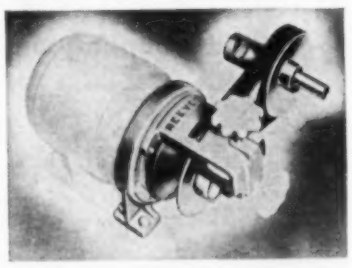
ELECTRONIC TIMER
timed on periods or timed delay



In the range between 0.05 and 20 seconds, this model 801 timer can be used for repeat cycling, programming or other intricate control functions. Repeat accuracy is high regardless of line voltage variations, tube aging, or temperature change. Standard mounting is panel type, though bench mounting is optional. The unit is accurate to less than 1 per cent variation in time intervals on successive operations. Made by **Timetrol Co.**, Dept. 101, 2919 Gladstone Ave., Rockford, Ill.

▲ For more details circle NED-299 E3 on enclosed inquiry slip ▲

VARIABLE SPEED DRIVES
for speeds within ratio of 8 to 1



Flexi - Speed variable speed drives can be used to drive in any direction and can deliver any desired speed within a ratio of 8 to 1. The driven shaft can be located anywhere around the motor shaft, and the speed control handwheel can be located parallel to or in any of eight positions perpendicular to the motor shaft. Six different length belts offer a choice of shaft center distances. Drives are available in 1/2, 3/4 and 1-hp capacities and are adaptable to practically all industrial applications, including those with in-line or right angle reducers, countershafts, chain and sprocket or V-belt drives. Made by **Reeves Pulley Co.**, 1225 Seventh St., Columbus, Ind.

▲ For more details circle NED-300 E3 on enclosed inquiry slip ▲

Blackhawk BENDERS
are just plain handier and really portable

WITH Blackhawk's "Porto-Power" Bender you can pump from *any spot.* Hydraulic pump is *separated* from bender by a flexible safety hose. Bender works in any position — on its side or upright . . . on table or floor . . . on existing runs. A man can move around, "jockey" the pipe with one hand — sight along it if necessary . . . without stopping the pumping.

There's a Blackhawk Bender for every popular size of conduit — rigid or thin-wall. Remember, too, "Porto-Power" hydraulic jacks lift machinery, pull pulleys, lick dozens of jobs. Compare *all* pipe benders and *you'll buy Blackhawk.* See your Electrical Wholesaler or Industrial Supply Distributor, Blackhawk Mfg. Co., Dept. P-1453 Milwaukee 1, Wisconsin.

Write for Blackhawk's free catalog 508 for electricians.

▲ For more details circle NED-302 E3 on enclosed inquiry slip ▲

For 30 Years — EXPERTS AT STAMPINGS IN SMALL LOTS SHORT RUNS

SPECIALIZING IN LOW-COST TOOLS, CLOSE TOLERANCES, BEST DELIVERIES.

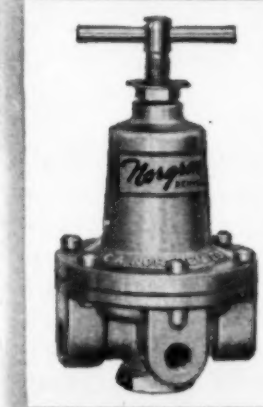
DAYTON ROGERS *Manufacturing Company*

Minneapolis 7, Minn.

▲ For more details circle NED-296 E3 on enclosed inquiry slip ▲

how NORGREN

- Cuts compressed air costs
- saves maintenance dollars



. . . *simply* by using Norgren Pressure Regulators to reduce air line pressures to the working pressures specified by air equipment manufacturers.

WRITE, NOW, FOR CATALOG SHEET

C. A. Norgren® CO.
3405 So. Elati St., Englewood, Colorado
Pioneer and Leader in Oil Fog Lubrication for 25 Years
• REGULATORS • LUBRICATORS • VALVES • HOSE ASSEMBLIES • FILTERS

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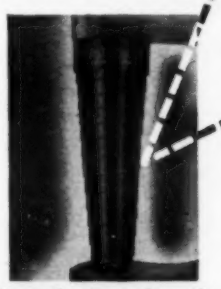
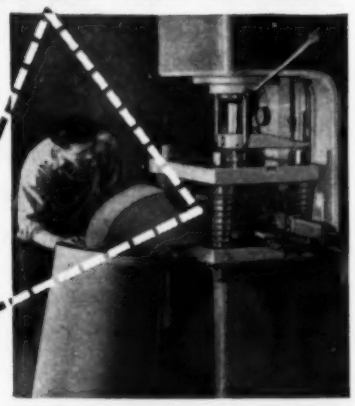
DIE LIFE INCREASED 25% with ELASTICONE® GUIDE PIN COVERS

Get increased performance from Dies with Elasticone Guide Pin Covers. Protects pins and bushings from nicks and scratches . . . preserves Dies' accurate alignment . . . reduces lubrication and maintenance. JUST SNAP INTO PLACE! *No Installation Costs!*





Elasticones are manufactured in stock sizes. Specify O.D. of bushing and full open height of set when ordering.

Investigate today the many new cost-saving engineering advantages in die designing with Elasticones.

Write for full information and literature.

CENTRAL
2208 EAST HUNTINGDON ST. PHILA. 25, PA.

CENTRAL SAFETY EQUIPMENT COMPANY

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ENGRAVING • PROFILING

for heavy production

with the Engravograph™®

Write for literature describing:

1. Heavy duty model Engravograph (as illustrated above) Catalog H 26
2. Portable model Engravograph Catalog 1M 26

NEW HERMES, Inc. Engravograph
13-19 University Pl. N. Y. 3, N. Y.
CANADA 359 St. James St., Montreal
World's Largest Manufacturer of Portable Engraving Machines

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CLUTCHES by ROCKFORD

Vancouver's Fireboat Stops Dock Holocaust

KERMATH MANUFACTURING COMPANY'S 550 H.P. ENGINES powered the fireboat that "hit the Vancouver dock fire like Niagara Falls". ROCKFORD POWER TAKE-OFF CLUTCHES transmit the power to the high-pressure fire pumps. Let ROCKFORD clutch engineers help develop power transmission for your heavy-duty equipment.

B-W ENGINEERING MAKES IT WORK B-W PRODUCTION MAKES IT AVAILABLE ENGINEERING BULLETIN SENT ON REQUEST

ROCKFORD CLUTCH DIVISION BORG-WARNER
312 Catherine Street, Rockford, Illinois, U. S. A.

For more details circle NED-304 E3 on enclosed inquiry slip

keep costs down

with accurate job time records

CALCULAGRAPH

FIGURES ELAPSED TIME ACCURATELY

PRINTS DATE
STARTING TIME
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Keep production costs in line with automatically computed, precision Calculagraph job time records. Just stamp card at beginning and ending of the operation. Calculagraph prints date, starting and finishing time plus precision calculated elapsed time. One Calculagraph can record and compute job time data for one entire shop or department by handling any number of cards in any sequence. Accurate, printed Calculagraph records can be filed for future use in estimating on new orders and checking production efficiency. Calculagraphs are low in cost, practically maintenance-free and built for a lifetime of dependable service.

COUPON BRINGS FULL INFORMATION — FILL IN AND MAIL TODAY!

CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

Send complete data on Calculagraph to:

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-305 E3 on enclosed inquiry slip

SMALL SEALED PUMPS for low pressure, high volume use

Hermetically sealed in oil, these hydraulic pumps are made in three capacities of 180, 350, and 475 gph, and are capable of 17½ ft lift. They can be used either as immersion or horizontal pumps and can develop suction lift by the use of a small foot valve. Oil supply is sufficient for life of pump, which will operate completely submerged and will pick up within ½-in. of bottom. Made by **Samuel S. Gelber Co.**, Dept. ED, 162 N. Clinton St., Chicago 6, Ill.

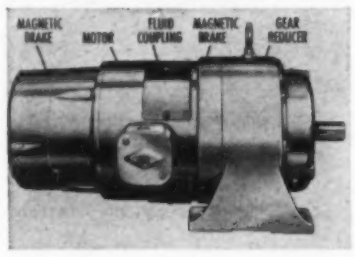
For more details circle NED-306 E3 on enclosed inquiry slip

CUTTER GRINDER portable and versatile

Portable cutter grinder weighs only 21 lb, can be used equally well for grinding engraving cutters, end mills, counterbores, countersinks and lathe tool bits. Separate grinding wheel spindle assembly permits the use of preloaded ball bearings that are shielded and greased for life. This feature eliminates vibration as well as relieving the motor bearings of an added variable load. Made by **Mico Instrument Co.**, 80-D Trowbridge St., Cambridge 38, Mass.

For more details circle NED-307 E3 on enclosed inquiry slip

MAGNETIC BRAKE & MOTOR fluid coupling unit for crane drive



Crane travel drives are among uses for the Motoreducer which consists of magnetic brake, motor with internal fluid coupling, second magnetic brake and gear reducer. When used on cranes the fluid-cushioned stops and starts eliminate the pendulum motion of the load through smooth deceleration and acceleration. Magnetic brake on the armature decelerates the load, while the second brake between coupling and gear reducer can be used to decelerate or hold the load stationary. Made by **Reuland Electric Co.**, Mission & Fremont, Alhambra, Calif.

For more details circle NED-308 E3 on enclosed inquiry slip

ELASTIC STOP NUT CORPORATION OF AMERICA
Dept. R17-527, 2330 Vauxhall Road, Union, N. J.

Please send me free design information on

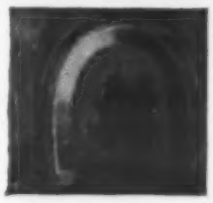
ROLLPIN TRADE MARK

. . . the slotted tubular steel pin with chamfered ends used for production economies in replacing

☐ a rivet ☐ a set screw
☐ a hinge pin ☐ a bolt and nut
☐ a stop pin ☐ a cotter pin
☐ a taper pin ☐ a dowel

NAME _____ TITLE _____
FIRM _____
STREET _____
CITY _____ ZONE _____ STATE _____

For more details circle NED-309 E3 on enclosed inquiry slip



BEFORE

Mold cleaned and finished by Pangborn Hydro-Finish in minutes!

AFTER

Pangborn Hydro-Finish cleans better—faster!

Molds, dies, tools—Pangborn Hydro-Finish cleans them quickly, leaves them bright and ready to use! Hand cleaning and polishing is practically eliminated! And production is further speeded up because Pangborn Hydro-Finish, operated by one man, removes scale and discoloration in minutes instead of hours. In addition, the use of fine mesh abrasives suspended in water gives you a precision job . . . holds tolerances to .0001" . . . protects delicate equipment.

GET COMPLETE FACTS on Hydro-Finish and how it can save *you* money! Write for Bulletin 1400A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

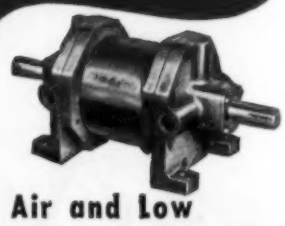
Pangborn

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment

BLAST CLEANS CHEAPER with the right equipment for every job

For more details circle NED-310 E3 on enclosed inquiry slip

GET THESE FEATURES IN ALL YOUR FUTURE CYLINDERS



Hydraulic High Pressure

- ★ Centrifugally Cast Cylinder Bodies
- ★ Cast Steel or Semi-Steel End Caps
- ★ Cast Iron Piston with Automotive Type Rings
- ★ Leakproof Packing. "O" Rings in each end cap
- ★ Adjustable Port Location
- ★ Fixed Cushions Standard Construction — Adjustable Cushions Optional

Air and Low Pressure Hydraulic

- ★ Compact — No Tie Rods
- ★ Extra heavy walls of selected tubing
- ★ Metal to metal assembly preloads piston cups
- ★ Automatic rod packing requires no take-up. Seals under pressure
- ★ Aluminum alloy piston with steel cup retainer
- ★ Extra long rod guide

HYDRO-LINE CYLINDERS CONFORM TO J. I. C. STANDARDS

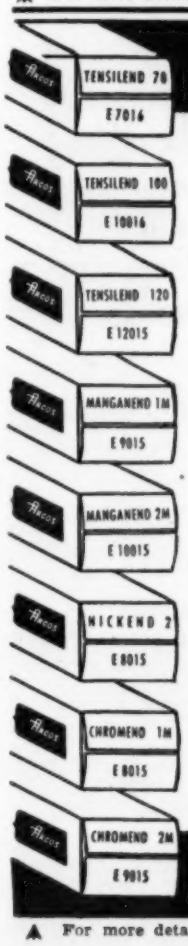
➔ FREE Additional Data

covering additional construction and performance features are included in this catalog. Write for your copy today. Ask for bulletin 350.

Hydro-Line

HYDRO-LINE MFG. CO.
701 19th St.
ROCKFORD, ILLINOIS

For more details circle NED-311 E3 on enclosed inquiry slip



Available For Your Use...

Practical, Fact-Filled Data Sheets give complete information on every grade of Arcos Low Hydrogen electrodes listed...*applications, weld metal analysis, mechanical properties, welding characteristics.* Write today for the Data Sheets that will guide you in the selection of the "right" electrode to produce sound high quality weld metal.

ARCOS CORPORATION
1500 South 50th St., Philadelphia 43, Pa.

For more details circle NED-312 E3 on enclosed inquiry slip

with "clear line" inside communication

AMPLICALL equips your business with a pressure-easing internal communication system. Its "clear line" facilities provide *2-second speech contact* within and between departments. AMPLICALL frees your busy switchboard for important outside calls—keeps personnel *on the job*—keeps talk terse—saves "waiting and walking" time. Today, more than ever, your business needs pressure-easing, time-saving AMPLICALL. There is a system to fit your special needs. Get the full facts today!

SEE YOUR PHONE BOOK For your nearest AMPLICALL specialist, look under "Intercommunication" in your classified phone directory—or write direct for full information.

ELECTRONIC AMPLICALL INTERCOMMUNICATION

RAULAND-BORG CORPORATION
3523-D Addison St., Chicago 18, Ill.

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Announcing...

General Plate CONFLEX Copper-Clad HARDENABLE STEEL

For High Conductive Electrical Spring Parts at Low Cost

Here's a new General Plate Composite Metal — *CONFLEX copper clad on hardenable medium carbon steel* — that can solve many of your electrical spring problems.

Comparable to bery lium copper in many respects, its primary advantage is *lower cost.* In addition, *CONFLEX copper-clad hardenable steel* has greater stiffness than hardenable copper alloys.

General Plate single or double copper-clad hardenable steel offers high electrical and thermal conductivity. Thickness ratios can be produced to give higher electrical conductivity than hardenable copper alloys when equal thickness of materials are compared.

CONFLEX copper-clad hardenable steel can be used advantageously for such applications as fuse clips, flat springs and electrical connectors. In applications, such as pen and pencil clips, the layer of copper provides excellent surface for electro-plated finish.

Write for complete information and Catalog PR700 which describes General Plate products.

METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
85 FOREST STREET, ATTLEBORO, MASSACHUSETTS

▲ For more details circle NED-315 E3 on enclosed inquiry slip ▲

PLASTIC BINDING PUNCH is electrically powered

Up to 20,000 sheets per hour of all types and sizes can be punched for binding with plastic by the model 116-EP electric powered punch. Machine requires no special tools for set-up and no special operator training. To prevent a punch from acting, set pins located directly over each punch are removed. Assembly of punched sheets into a plastic bound booklet is accomplished on a companion model 16-FB foot-powered binder. Made by **General Binding Corp.**, 806 W. Belmont Ave., Chicago 14, Ill.

▲ For more details circle NED-316 E3 on enclosed inquiry slip ▲

RUBBER HOIST HANDLE attaches to cord-type controls

New safety handle fits all power hoists using separate pull controls for raising and lowering, is molded in oil and grease resistant rubber. Non-slip quality is provided by molded gripping ridges which circle the handle from top to bottom. Identification of handle action is assured by "up" or "down" lettering permanently molded on the handle. Made by **Byron Jackson Co.**, PB Div., 2301 E. Vernon Ave., Los Angeles 38, Calif.

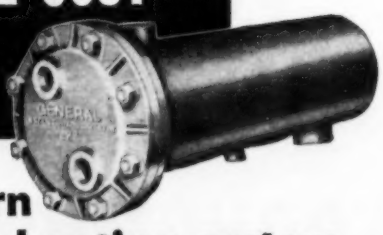
▲ For more details circle NED-317 E3 on enclosed inquiry slip ▲

CIRCULAR SHAPES made of variety of materials

Circular shapes made from strip, square or round stock, tubing and channels are available, made to customer specification. Company can handle up to ½-in. bar stock and strips from 1/16-in. thick to 1½ in. wide for producing shapes of all types. Service offered by **Auto-Diesel Piston Ring Co.**, 3122 Superior Ave., Cleveland 14, O.

▲ For more details circle NED-318 E3 on enclosed inquiry slip ▲

FOR LESS THAN ½ THE COST



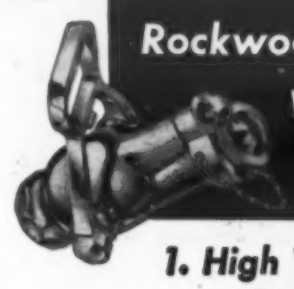
...a modern water heating system

Compact GENERAL Instantaneous Water Heaters cost you far less to buy, install, and maintain. And, they can be installed in a fraction of the space required by storage tanks of equal capacity! The largest of 20 sizes measures only 21" x 84" . . . and delivers 300 gpm. Can even be installed overhead, completely out of the way. Just tap into existing live or exhaust steam lines . . . no excavating, no complicated piping. More dependable, too . . . seamless copper tube, bronze head and tube plate assure you of continuous rust-free hot water for years and years. For detailed information, write, wire, or call General Fittings Co., Dept. I, 123 Georgia Ave., Providence 5, Rhode Island.

GENERAL INSTANTANEOUS WATER HEATERS

▲ For more details circle NED-319 E3 on enclosed inquiry slip ▲

3-Way FIRE PROTECTION



Rockwood Triple-Action WaterFOG Nozzle Discharges:

1. High Velocity WaterFOG
2. Straight Stream
3. Low Velocity WaterFOG

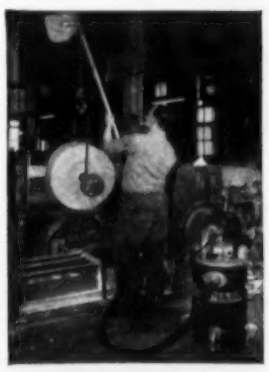
The Rockwood SG-48 WaterFOG Nozzle puts out fires in flammable liquids and ordinary combustibles faster and with less water. Protects operator from heat and fumes, is easier to handle — and operates efficiently with a water pressure of 50 p.s.i. at the nozzle. For chemical and industrial plants, oil refineries, public buildings, municipal fire departments, etc. Approved by Underwriters' Laboratories, Inc., and Factory Mutual Laboratories.

Bulletin C501 gives you complete information. Write for your copy.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to cut fire losses
44 Harlow Street, Worcester 5, Mass.

▲ For more details circle NED-320 E3 on enclosed inquiry slip ▲

Housekeeping Headache *Takes a Powder* when TORNADO® goes to work



Overhead Too

Lightweight tools simplify cleaning of overhead fixtures and equipment.

The Standard Packaging Corp., Chicago, uses a fine drying powder in printing millions of foil milk bottle closures every day. This powder leaves a fine, dust-like deposit on their presses, floor and overhead fixtures.

To beat their housekeeping problem, Standard puts Tornado to work. Air rushing through this cleaner at more than 300 m.p.h. supplies plenty of powerful vacuum. This means faster, more thorough pressroom cleaning—and reduced maintenance costs.

If you have a problem with dirt, dust, chips, water or oil in your plant, find out how Tornado can clean things up—boost production by improving working conditions, efficiency and morale.

WRITE FOR YOUR COPY OF BULLETIN 600

BREUER ELECTRIC MFG. CO.
5116 NORTH RAVENSWOOD AVENUE • CHICAGO 40, ILLINOIS

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Save BIG MONEY ON BABBITT by using PROMET XXX LONG SERVICE LEAD BASE BABBITT

A fine, velvety grain babbitt made entirely from pure virgin metals, perfectly alloyed and heat treated to withstand tremendous loads at high speeds and elevated temperatures that would be dangerous with other babbitts.

Tensile	10,000
Elong	5.5%
Compress Strength	10,000

Promet XXX will not score, cut or powder even in lubrication failures. The coefficient of friction is considerably less than that of tin babbitts, thus reducing power loss and wear. The entire bearing surface wears uniformly, without pitting.

Simply heat to 900°-1000° F. and pour. Can be heated to 2000° F. without burning or injury. Repouring only refines it. There is no appreciable shrinkage, hence a better contact with supporting shell, a more solid, rigid bearing.

Ideal for use in blowers, cement mills, clay working machines, compressors, conveyors, crushing machinery, diesel engines, dredges, fans, machine tools, mining machinery, motors and generators, paper mills, pumps, rock and gravel plants, saws, steel mill bearings and sugar mills.

Supplied in 10 lb. pigs.

IMMEDIATE DELIVERY

Write today for service data sheets and quotations.

THE AMERICAN CRUCIBLE PRODUCTS CO.
1327 Oberlin Avenue **Lorain, Ohio, U.S.A.**

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ABRASIVE BELT GRINDING... New free booklet tells how to cut costs—raise production

Source: THE CARBORUNDUM COMPANY
Niagara Falls, New York

The exciting story of how plants all over the country are increasing grinding production by as much as 350%—by using the proper combination of CARBORUNDUM's Abrasive Belts and Contact Wheels—is told in this new booklet, "Abrasive Belts by CARBORUNDUM."

It gives you over 20 case histories, with photographs and production figures, of operations which are now being done on belt grinders at terrific savings in time and money. In many cases these savings resulted from changing to belts from grinding wheels or set-up wheels; in others, it was a matter of improving belt performance by choosing the right combination of belts and contact wheels.

It will give you some good ideas about the operations you could do better with belts... and the facts you need to make your present belt grinding jobs more profitable.

It describes the many advantages of the revolutionary new "T-61" Universal Hub Contact Wheel by CARBORUNDUM—the wheel that increases belt life up to 50% or more; and allows you to do *every* operation, from roughing to finishing, without removing the hub from the spindle.

Send for your copy today. No obligation, of course. Circle the number on the inquiry form—or, if you prefer, address your request to us at Dept. NED 82-315.

And remember, for everything in abrasive products, call your CARBORUNDUM distributor or salesman.

"Carborundum" is a registered trademark of The Carborundum Company, Niagara Falls, New York

82-315

▲ For more details circle NED-323 E3 on enclosed inquiry slip ▲

quick to stick no need to lick!

AVERY Kum Kleen self-adhesive LABELS

THE EASIEST AND MOST ECONOMICAL LABEL YOU CAN USE!

- TRADEMARKS
- GUARANTEES
- NAMEPLATES
- DIAGRAMS
- APPROVAL SEALS
- INSTRUCTIONS
- "BUY" FEATURES
- WARNING
- INSPECTION
- PRICES

SAVE YOU TIME - MONEY!

An Avery label specialist will gladly explain how you can use Kum-Kleen pressure-sensitive labels profitably in YOUR business. Mail the coupon now for complete facts.

PATENTED AVERY ELECTRIC DISPENSER

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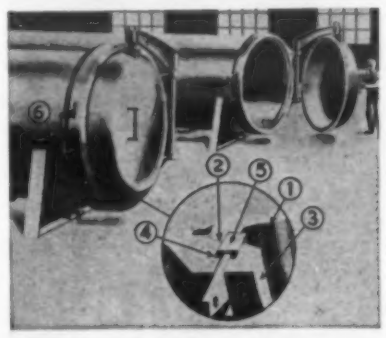
117 Liberty St., New York 6 • 1616 S. California Ave., Monrovia, Cal.
608 S. Dearborn St., Chicago 5 • Offices in other principal cities

☐ Please send case histories and samples
☐ Tell us about your electric label dispenser
☐ Have the local Avery man call

Name _____
Title _____
Company _____
Address _____

▲ For more details circle NED-324 E3 on enclosed inquiry slip ▲

PRESSURE VESSEL DOOR for pressure or vacuum use takes only seconds to operate

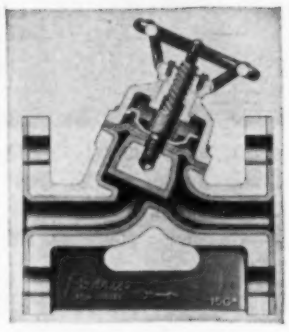


Fast action pressure vessel door withstands temperatures up to 400° F and pressures to 300 psi, is equally adaptable for use in equipment operating at atmospheric pressure or under high vacuum. One manufacturer was able to reduce the time required for opening or closing the doors on vulcanizers from 20 minutes to 30 seconds.

Operating principle is simple. The door (1) fits into an opening in the doorframe in such a way that a bevel on the door meets a bevel on the inner surface (2) of the doorframe. In this flange is an annular groove (4) in which a split ring (5) floats. Hand operated jack (6) or a hydraulic cylinder operates the door by expanding or contracting this split ring. Made by **Blaw-Knox Co.,** Process Equipment Dept., Dept. NED, Farmers Bank Bldg., Pittsburgh 22, Pa.

▲ For more details circle NED-325 E3 on enclosed inquiry slip ▲

DIAPHRAGM VALVES form air tight closure to control corrosive and abrasive fluids



Shut-off, throttling and control of acids, chemicals and other corrosive and abrasive fluids are functions of X-V series diaphragm type valves which feature individual operation of diaphragm and disk. Sealing the mechanism and seating the disk are thus accomplished separately, minimizing wear on diaphragm. Disk is constructed with ample covering surface material for air tight closure over fine grits.

Other features include replaceable disk, full port capacity, easy-to-read valve position indicator, low pressure drop and rib support for body strength. Made with bodies of cast iron, 316 stainless steel or Hastelloy C, valves can be either unlined or lined with same material as diaphragm and disk. Diaphragms can be rubber, Neoprene, Kel-F or Buna N. Connections are flanged, screwed or union. Motor operated units are also available. Made by **Farris Flexible Valve Corp.,** 551 Commercial Ave., Palisades Park, N. J.

▲ For more details circle NED-326 E3 on enclosed inquiry slip ▲

ECONOMICAL

STAMPED PARTS IN SMALL QUANTITIES

Yes, it *is* possible—but it's a special skill of ours.

It's done with a new price-slashing method of making dies, used in conjunction with special machinery. In other cases we use custom equipment for die-less duplication by our own Machine-Cut Method.

FOR EXPERIMENTAL OR PRODUCTION REQUIREMENTS at rock-bottom prices, send us your blueprints. And make sure you get our latest, fact-packed literature.

STAMPINGS DIVISION
"ONE PIECE OR ONE MILLION"

LAMINATED SHIM COMPANY, INC.

2305 UNION STREET • GLENBROOK, CONNECTICUT

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COLONIAL CUTTING PADS

CUT COSTS FOUR WAYS

COLONIAL CUTTING PADS can save you money in four ways—

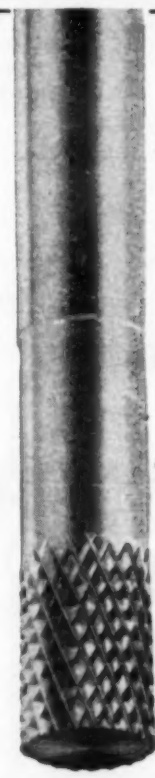
1. They reduce die wear and breakage
2. They reduce rejects
3. They're usable on both sides
4. They're returnable—after full use—for generous credit.

Made of tough, "self-healing," non-oxidizing TYGON plastic, COLONIAL Cutting Pads are clean, dustless, and long wearing. They reduce rejects caused by dirt and dust or by double cutting due to "bounce back." They are widely used in the accurate machine or hand die-cutting of rubber, leather, plastics, cork, candy, paper, fabrics, foils, or light gauge metals. They are available in 2 hardnesses (Standard and Extra Hard) and in 9 standard sizes: 40"x40"x1", 40"x40"x¾", 20"x40"x1", 20"x40"x¾", 20"x20"x⅜", 20"x20"x½", 20"x20"x⅛", 18"x36"x1", 8"x36"x¾".

Write, right now, for full information and prices

COLONIAL RUBBER CO.
RAVENNA, OHIO

▲ For more details circle NED-328 E3 on enclosed inquiry slip ▲



- *SOLID carbide for greater rigidity, increased accuracy*
- *Superior grade of carbide assures longer tool life*
- *Master-machined for greater concentricity, precision work*
- *Operates efficiently at grinding wheel speeds*
- *No down time for dressing — maintains size and shape*
- *Most efficient tool for small hole finishing*

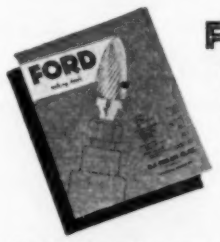
Save 75% of internal grinding time with

FORD

SOLID CARBIDE

Grinding Burs

Yes, in only one-fourth the production time required by use of mounted points, FORD solid carbide grinding burs will remove material hardened up to 68 RC. Save down time, tool cost. Ford carbide burs can be resharpened many times and still retain new-tool accuracy. Let us prove it. Write today.



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HSS ground cutters, rotary files and countersinks. CARBIDE cutters, end mills and grinding burs.

Get complete details plus operational data on over 300 Ford rotary tools in new Catalogue No. 207.

FORD regrinding service adds tool life, reduces tool costs!

M. A. FORD MFG. CO., INC.

Pioneers in rotary tools for more than 30 years

DAVENPORT 5, IOWA

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...factories L-O-V-E EVIS-ized H_2O

. . . because it puts an end to scale deposits in Piping Systems, Boilers (to 175# wp), Condensers, Heat Exchangers and other plant equipment without the use of costly additives.

This phenomenal new water treatment method applies a continuing catalytic effect which changes the physical behavior of raw water in several valuable ways. *EVIS IS NOT A SOFTENER*

Pats. Applied For

FLOW LINE TYPE UNITS HELP ELIMINATE SCALE FROM DEEP WELL PUMPS (Screwed Only) 2", 2½", 3" & 4" or larger on order.

Sold on 90-DAY MONEY BACK GUARANTEE

SIZES (iron or bronze)
SCREWED • ½" thru 2"
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SOLD BY . . . Plumbing Supply, Air Conditioning-Refrigeration and Industrial Jobbers

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ALBANY (New York) EVIS-NORTHEAST CO. 37 Rapple Dr., UN 9-7921
EXCLUSIVE MARINE DIST. MORAN-EVIS CO., SAN FRANCISCO 420 Market St., DO 2-4565

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For more details circle NED-331 E3 on enclosed inquiry slip

GOULDS Fig. 3642 close-cupled centrifugal pump. Capacities to 110 GPM. Heads to 120 ft.

NEW GOULDS PUMP
saves space, slashes installation, operating and maintenance cost

- COMPACT DESIGN—Fits in tight spaces. No coupling needed.
- EASY INSTALLATION—Bolt pump down. Connect power—and operate. 8-position casing.
- MINIMUM MAINTENANCE—Remove motor, adapter and rotating element without disturbing piping connections.
- QUIET OPERATION—Impeller, only moving part, carefully balanced for noiseless performance.
- NO STUFFING BOX LEAKAGE—Mechanical seal prevents leakage, requires no maintenance.
- LONG TROUBLE-FREE SERVICE—Sturdy construction assures long operating life.

For performance curves, prices, etc., contact your Goulds representative or write for bulletin 624-A3.

Goulds PUMPS INC. Seneca Falls New York

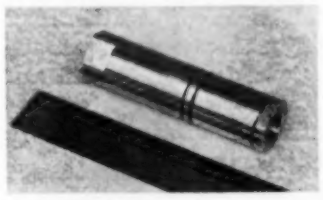
For more details circle NED-332 E3 on enclosed inquiry slip

EXTENSION DRILLING CHUCKS fit over 52 small diameter drills

Drilling in hard-to-get-at locations is facilitated by line of drill extension chucks which fit over 52 small diameter drills without brazing or soldering. Extension chucks with antislip feature, using regular length drills, fit threaded drill extension rod and can be interchanged in seconds. Rod measures 8½ in. long by ¼-in. diameter and fits all ¼-in. drive chucks. Chuck sizes correspond to standard drill sizes and are furnished from 1/16 to 3/16-in. by 64ths. They can be used on lathes, drill presses, portable power and hand drills. Made by **Beaver Tool Co.**, 183N New York Ave., Huntington, L. I., N. Y.

For more details circle NED-333 E3 on enclosed inquiry slip

PRESSURE RELIEF VALVE is light, compact control



Pressure relief valve is suitable for high and low pressure service, has only one moving part for increased reliability, is light in weight and is easy to install because it requires little space. It relieves and equalizes fluid pressures to a predetermined level, maintaining proper pressures despite changes in demand. Maximum free flow through valves is equivalent to the pipe size used. Produced in many materials to both aircraft and standard pipe size by **Anco, Inc.**, Dept. 29-B, 1 Baker St., Providence 5, R. I.

For more details circle NED-334 E3 on enclosed inquiry slip

WORM DRIVE ASSEMBLY small unit is right angle type

Designed for general industrial machinery, this small right angle worm drive is for application to shafting from ⅜ to 1 in. diameter. Compact unit has no external projection of the worm beyond the small housing. Drive incorporates a locking ball drive so that the entire assembly can be placed on the shafting, closed in by bearings without disassembly or drilling of the shaft. Alemite grease fitting is provided for lubrication. Reduction ratio is one turn of universal joint to ten turns of the driving shaft. Made by **Durant Mfg. Co.**, 1922 N. Buffum St., Milwaukee 1, Wis.

For more details circle NED-335 E3 on enclosed inquiry slip

FREE DOWEL PIN BULLETIN

Tells How to Save Assembly Time!

DANLY DOWEL PINS

- Accurately hardened—will not upset!
- Precision ground to limits of ±.0001"
- Two complete size ranges—standard and oversize
- Tapered lead end—easy to drive

DANLY MACHINE SPECIALTIES, INC.
2100 South Laramie Avenue
Chicago 50, Illinois

Complete Data!
Send For This Free Bulletin Today!

For more details circle NED-336 E3 on enclosed inquiry slip

How To Save Up To 60% On Gear Costs!

SINGLE stampings are now successfully laminated and indexed to produce wider faces! Up to 60% savings in gear costs are possible by this method. These wide faced *Stamped* Gears run smoothly and efficiently. Surpassing skill and precision in tooling, stamping and assembling assures their uniform accuracy. We stamp gears of *any* kind, from *any* material. Stock dies are here for about every purpose. You'll like this *better* Stamped Gear service. It will save time and money for *you*, too!

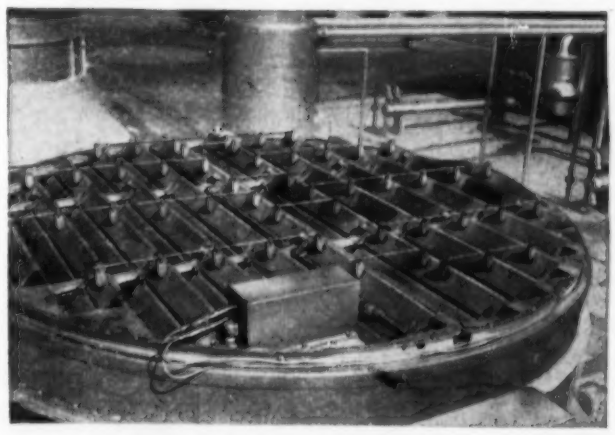
SEND FOR samples, ideas, suggestions, and low cost estimates. Write or phone us today!

WINZELER MFG. & TOOL CO.
1716 WEST ARCADE PLACE • CHICAGO 12, ILLINOIS

For more details circle NED-337 E3 on enclosed inquiry slip

for your air control application, too—

Choose Honeywell dampers



THIS BIG multi-louver damper was designed and built by Honeywell for regulating air flow through a cooling tower. It's typical of the almost endless variety of dampers which Honeywell offers for any air-flow control application in industry. Included in the Honeywell line are round and rectangular louver dampers . . . round dampers, right-angle mixing dampers . . . *Grad-U-Flow* outlet dampers . . . fire dampers. All are made "to measure," in practically any desired size . . . with electric, pneumatic or manual operation.

Honeywell dampers embody every possible feature to assure accurate positioning and trouble-free service. Whatever your application, your local Honeywell engineering representative will be glad to offer valuable assistance . . . and he's as near as your phone.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4529 Wayne Ave., Philadelphia 44, Pa.

● REFERENCE DATA: Write for Catalog 8502, "Dampers and damper operators," and Catalog 8305, "Industrial Controls."

MINNEAPOLIS Honeywell BROWN INSTRUMENTS
First in Controls

For more details circle NED-338 E3 on enclosed inquiry slip

WRITE YOUR OWN TICKET FOR

Quality Wire!

SPECIFY SENECA FOR WIDE RANGE OF USES

- ☐ Aircraft
- ☐ Armature
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- ☐ Car Seal
- ☐ Cotter Pin
- ☐ Curtain Spring
- ☐ Flexible Shaft
- ☐ Glass Netting
- ☐ Hair Pin
- ☐ Lock Spring
- ☐ Piston Ring
- ☐ Plow Steel
- ☐ Ring Traveler
- ☐ Rope
- ☐ Spark Coil
- ☐ Core
- ☐ Spring
- ☐ Stapling
- ☐ Stitching
- ☐ Weaving

Whatever your needs in wire . . . specify SENECA for *top quality* and *uniformity!* High or low carbon steel wire . . . aluminum . . . bronze. Sizes No. 40 W & M (.007) and larger . . . round, half round, oval, square, flat, straightened and cut. Finishes—bright, soft annealed, coppered, liquor, tinned, bright galvanized, oil tempered, enameled. Write about your requirements.

SENECA WIRE & MANUFACTURING COMPANY, FOSTORIA, OHIO

Representatives in practically All Principal Cities

▲ For more details circle **NED-340 E3** on enclosed inquiry slip ▲

COME *Clean with a* Clarke

Thirty-five years of Clarke know-how are built into Clarke floor maintenance machines to do your cleaning easier, faster and **better.** A Clarke does the job month after month without repair expense because it's job-designed and built for years of rugged service. That's why you should investigate Clarke **before you consider any other floor maintenance equipment.**

WD-23 WET-DRY VACUUM

No cleaning job—wet or dry — is too big for the WD-23 Wet-Dry Vacuum. Heavy porcelainized tank, inside and out, resists rust. Handy dump valve eliminates heavy lifting. Handy attachments available. Model WD-15 for smaller area jobs.

P-17 FLOOR MAINTAINER
(With Water Tank Attachment)

Scrubbing a floor spotlessly clean is no chore for this Clarke P-17 floor maintainer (shown with water tank attachment, available at slight extra cost). Works easily on any type floor.

Clarke SANDING MACHINE COMPANY
223 East Clay Avenue, Muskegon, Mich.
Authorized Sales and Service in Principal Cities

SEND TODAY!

Send this coupon for full, colorful details on Clarke floor maintenance equipment that will save you working time — and money.

Clarke Sanding Machine Company
225 East Clay Avenue, Muskegon, Michigan

Please send me full details on Clarke equipment and the name of my nearest dealer.

NAME_____

ADDRESS_____

CITY_____ ZONE____ STATE____

▲ For more details circle **NED-341 E3** on enclosed inquiry slip ▲

SKID RACKS
assembled without bolting, welding

Only a hammer is needed to assemble these skid racks which are composed of prefabricated sections of heavy wall square tubing. Racks will carry extremely heavy loads and can be tiered to any height desired. They are available in standard, heavy duty or extra heavy models. Made by **American Metal Products Co.,** 5971 Linsdale Ave., Detroit 4, Mich.

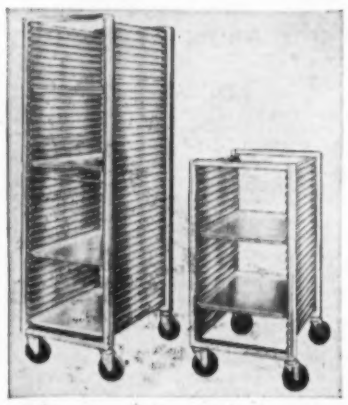
▲ For more details circle **NED-342 E3** on enclosed inquiry slip ▲

WEATHERPROOF SOCKET
bears Underwriters' approval

Capable of withstanding all types of weather and constant abuse, the No. 145 socket features an all-rubber, watertight construction. It is made with No. 14 type R Underwriters' approved wire and has a nickel plated screw shell and Bakelite washers. Entire unit has UL approval. Extended lip presses onto glass of the bulb when screwed into the socket. Wire enters socket through sealing boots. Made by **Eagle Electric Mfg. Co.,** 23-10A Bridge Plaza S., Long Island City 1, N. Y.

▲ For more details circle **NED-343 E3** on enclosed inquiry slip ▲

RACK TRUCKS
trays or tote boxes act as shelves



Shelves can be located to suit various sizes of parts handled in these wheeled material handling racks. Trays or tote boxes act as shelves and are slid into grooves formed by the corrugated side walls. Corrugations are on 1½-in. centers. Racks are mounted on 5-in. heavy duty ball bearing casters and all parts of rack are of aluminum alloy, but steel is available. Units are available to handle from 6 to 82 trays of various sizes. Made by **Crescent Metal Products, Inc.,** Dept. NED, 18901 St. Clair Ave., Cleveland 10, O.

▲ For more details circle **NED-344 E3** on enclosed inquiry slip ▲

BARRETT "5-HUNDRED" ELEVATOR

An inexpensive, all-purpose portable elevator for loads up to 500 lbs., 5 ft. or 7 ft. lift; 24-inch square platform handles boxes, crates, drums, dies, etc. For loading dock, racking and storage operations; as supporting table, high level repair platform and many other time- and money-saving uses. Easily raised and lowered by hand, loads safely held at any height. Other low priced standard models offer capacities of 1000 and 2000 lbs. Write for Bulletin 5131.

BARRETT-CRAVENS COMPANY
4623 S. Western Blvd., Chicago 9, Ill.

Representatives in All Principal Cities.

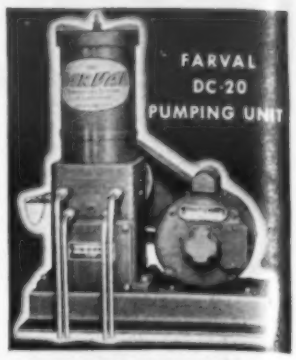
Canadian Licensee:
S. A. Armstrong Ltd., Toronto

BARRETT
One man does more than 3 or 4 . . . with a Barrett

▲ For more details circle **NED-345 E3** on enclosed inquiry slip ▲

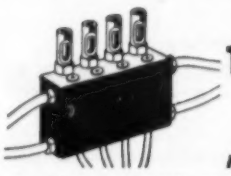
NEW AUTOMATIC LUBRICATION FOR SMALLER MACHINES

SMALLER machines can now have a completely automatic system of Farval centralized lubrication—as efficient and economical as the larger Farval systems which have proved so valuable on heavy industrial equipment during the past 26 years.



Only 20½" high. Base 15" x 10½"
Driven by ¼ hp ac motor.

Heart of the system is the new small DC-20 pumping unit which is adaptable for compact, easy installation. Designed for use with unique Dualine valves that deliver exact measured amounts of lubricant to each bearing as often as desired. No need to stop machine for lubrication. Eliminates down time required for hand oiling. Saves up to 75% in lubricant. WRITE NOW FOR FREE BULLETIN 39.

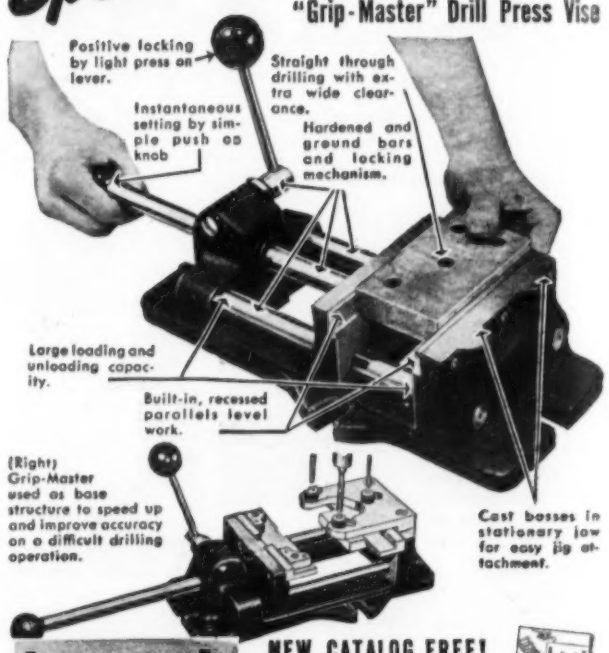


THE FARVAL CORPORATION
3283 East 80th Street
Cleveland 4, Ohio

Farval is an affiliate of The Cleveland Worm & Gear Co.

▲ For more details circle **NED-346 E3** on enclosed inquiry slip ▲

Speed-up OPERATIONS with heinrich "Grip-Master" Drill Press Vise



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Be sure you have a complete Heinrich Tool Catalog in your files. Your copy will be sent free upon request.

Dept. 303-E • RACINE, WISCONSIN
Drill Press Vises • Fixture Locks • Nibblers
Punches • Rod Cutters

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Give you *LEGIBILITY* that *lasts* in metal

Why not let experienced Grammes craftsmen help design the plate that is right for your product? Whether etched, embossed, lithographed or enameled—aluminum, brass or stainless steel—they'll make sure your plate has the right finish for attractiveness and wearability . . . and resists corrosion or deteriorating elements.

PROMPT DESIGN SERVICE Your rough sketch or blueprint will bring prompt recommendations and prices. Meantime write for our new booklet, "Tips on Name Plate Selection and Design."

L. F. GRAMMES & SONS INCORPORATED ALLENTOWN, PA.

NAME PLATES DIALS — TRIMS • BEZELS PANELS

SPECIALISTS IN DECORATIVE METAL

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production flows smoothly...

at top speed, at all times, yet free of rejects

Kester makes 62 different fluxes to meet any requirements. Why not write our Technical Department for full information?

KESTER SOLDERING FLUX

KESTER SOLDER COMPANY
4249 Wrightwood Ave., Chicago 39
Newark 5, N. J. • Brantford, Canada

KESTER SOLDER

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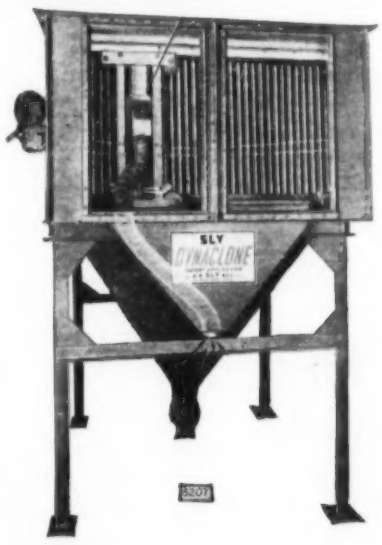
CLOTH SCREEN DUST FILTER
provides continuous and uniform suction

After three years of successful operation in numerous installations for prominent firms, the SLY DYNACLONE has proven its advantages over existing units for the collection of a large variety of dust. Many of these installations are repeat orders. The advantages are: (1) Constant uniform suction at the dust source, (2) no mechanical shaking, (3) continual cleaning of the filter bags, and (4) longer bag life.



The usual sheet metal case contains a number of cloth filter bags. A fan creates the suction which draws the dust-laden air into the case. The air passes through the filter bags which retain the dust.

In order to maintain peak efficiency, the dust must be removed from the filter cloth. Here's how it's done (patented): With the filter case under suction, a device which travels back and forth over the open ends of the filter bags has a flexible hose leading to the outside of the filter case. The suction on the case will draw atmospheric air up into the traveling device and in reverse direction through the filter bag which happens to be opposite the device. This reverse flow of air removes the dust from that bag and lets it drop into the hopper under the filter case.

The cleaning device travels back and forth at the rate of about 3 ft. per minute, so that each bag in a 12 ft. long filter case will be cleaned about once every four minutes. Thus the filter bags will be cleaned constantly. This will permit the passage of air through the cloth to be maintained at a uniform rate, causing a uniform suction at the dust points. This is of particular importance where a dust filter is used on a process job, where uniform suction is of importance for maintaining a uniform rate of production, either as to fineness or quantity of product, or both.

The principle of operation of this SLY DYNACLONE is described in Bulletin 101. Requests for this bulletin and information on application of this design should be addressed to **The W. W. Sly Manufacturing Co.**, 4748 Train Avenue, Cleveland 2, Ohio.

Advt.

▲ For more details circle **NED-350 E3** on enclosed inquiry slip ▲

ELAPSED TIME INDICATOR
for limited panel space mounting

Meeting standard 2½-in. JAN dimensional specification for panel mounting, model HM2ET elapsed time indicator is easy to read as it has a standard size counter. Unit is hermetically sealed and tamperproof, as well as being immune to environmental conditions of humidity, temperature and dangerous atmospheres. Motor will start and operate continuous at temperatures ranging from −55 to 85° C. Indicator registers in 1/10-hr steps to 9999.9 or hour steps to 99999. Operation is on either 110-125 v or 220-250 v, 50 or 60 cycles ac. Made by **Marion Electrical Instrument Co.**, 414 Canal St., Manchester, N. H.

▲ For more details circle **NED-351 E3** on enclosed inquiry slip ▲

DIAMOND MASONRY SAW BLADE
rim has deep cutting segments

Useful blade life is increased by the deep segments of the "Super-Rim" diamond saw blade series, which is especially suited to the cutting of glazed brick and tile, terra cotta, sewer pipe, stone, quarry tile and acid brick. Blades are made with a solid steel center, and are available in diameters from 6 to 30 in. Four grades are provided to insure most efficient cutting in a variety of materials. Made by **Robert G. Evans Co.**, 6317 Brookside Plaza, Kansas City 13, Mo.

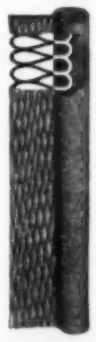
▲ For more details circle **NED-352 E3** on enclosed inquiry slip ▲

STUD PULLER & CHUCK
adaptable to various machine tools

Savings in time can be realized through use of this multi-purpose keyless automatic stud puller and chuck. It does drill press work, is adaptable to milling machines, lathes and portable impact tools or machines and can be used for stud extracting and setting. Tool eliminates most stud bolt breakage because of its dead center pull. It does not score or mark bolts and is available in several sizes. Available from **Faver, Inc.**, Dept. NED, 4762 S. State St., Salt Lake City 7, Utah.

▲ For more details circle **NED-353 E3** on enclosed inquiry slip ▲

Can our product help you improve your product?



This is **INNER-SEAL.** It's extremely durable, extremely effective . . . with many features that eliminate sealing problems in the manufacturing of countless products.

Inner-Seal's bead is of *live sponge rubber* which compresses under pressure, then springs back into shape. Its flange is of *woven spring wire*, tough but flexible enough to fit snugly around corners. Its coating is of *waterproof neoprene* . . . designed for sub-zero or tropical temperatures, sunlight, humidity, grease, oil or abrasion. Available in various dimensions. Standard Inner-Seal in many colors . . . heavy-duty "dumb-bell" type in black . . . special types can be made to order.

Although Inner-Seal is most widely known in the refrigeration, railway, shipping and automotive fields, it's continually finding many new applications. Maybe *you* have one . . . maybe we can help!

FREE SAMPLES and complete information. *Write today.*

Bridgeport INNER-SEAL *Live Rubber* WEATHER STRIPPING

BRIDGEPORT FABRICS, INC., BRIDGEPORT 1, CONN.

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Model 30-MCC

DOUBLE BLADE LIFE

MANCO MILL-TYPE CUTTER WITH REVERSIBLE JAWS

Jaws reversible to provide second cutting edge. Jaws alone available to fit standard 30" bolt cutters.

New exclusive Manco bolt cutter design gives you twice the cutting life from one set of jaws. **Handles** are tough drop forgings **—guaranteed against breakage.** Completely streamlined. Available in 30" size. Capacity ½" bolts—⅜" rod.

STEEL STRAPPING CUTTER GETS UNDER TIGHTLY BOUND STRAP

New fast-action strap cutter. Light weight—only 1 lb. yet extremely durable all tool-steel construction. Capacity for ¾" x .035 strap.

See Your Industrial Distributor, or write Dept. NED-5

MANCO MFG. CO.
BRADLEY, ILL.

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WISSCO STEEL PROCESSING BELT

Turn your products out faster, more economically in continuous straight-line production with a Wissco Belt. To order, write or call our nearest sales office.

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1431

WISSCO BELTS
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION CF&I

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Quick, Easy, Low Cost Way to

STOP LEAKS

. . Seal Out Dampness in Basement Walls!

Leaks in concrete walls, masonry, cinder block, etc., can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. (Minimum quantity 6 gallons)

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- ELEVATOR PITS
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Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN — no obligation.

Name .....
Company .....
Address .....

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this new WELDING DESIGN MANUAL

FREE!

FOR THE ASKING

To assist you in your re-tooling problems . . . or to help you analyze your present welding methods so that you may enjoy maximum speed, efficiency, and economy in many of YOUR production problems...

Giant new 4th Edition contains 62 new photographs, 132 new drawings, 72 pages of helpful data covering basic and advanced welding techniques and designs used in fabricating and assembly. Profusely illustrated with application drawings; weld diagrams; tables of melting temperatures, strengths, corrosion factors; charts; alloy recommendations; etc. Convenient digest size.

This just-off-the-press book is "must" reading for anyone engaged in defense production and design, and will certainly be time profitably spent for any production man.

SEE . . . The unbelievable savings in metal-joining which can now be yours through the use of "Low Temperature Welding Alloys"® discovered a few years ago and now used in over 78,000 industrial plants throughout America for more efficient metal-working production as well as for salvaging irreplaceable tool and machine parts.

Over 100 different, new, EUTECTIC Low Temperature WELDING ALLOYS® and EUTECTOR® Fluxes are job-engineered for use on ALL metals—cast iron, alloy steels, aluminum, copper and nickel alloys, die castings, overlays, etc., and may be applied with ALL heating methods—torch, arc, furnace, induction heating, etc.

SEND FOR YOUR COPY TODAY!

EUTECTIC WELDING ALLOYS CORPORATION
172nd Street at Northern Boulevard • Flushing, New York, N. Y.

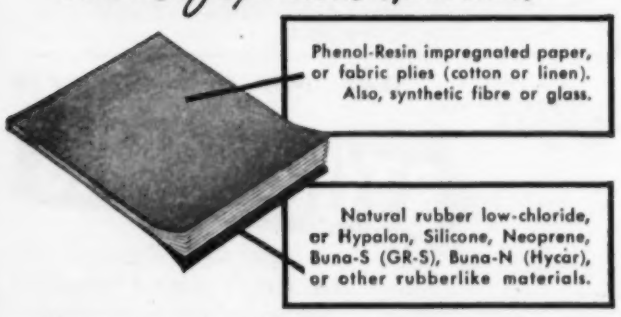
For more details circle **NED-358 E3** on enclosed inquiry slip

EXCELLENT PUNCHING CHARACTERISTICS
High Dielectric Strength!

ORCOID is an electrical insulating material made in sheet form. It combines the mechanical strength and electrical insulating properties of Phenol-Resin impregnated laminates with the flexing and sealing qualities of rubber, or synthetic rubber.

Among the many applications of ORCOID are punched or cut washers used in hermetically sealed capacitors.

made of Optional Materials



Almost any combination of specified properties can be met by compounding the correct type of rubber or rubberlike material and hot-pressing with any of several optional Phenol-Resin impregnated laminates under optimum conditions.

ORCOID laminates are economical to use! Contact your fabricator or ask us for full details.

THE OHIO RUBBER COMPANY
DIVISION OF THE EAGLE-PICHER COMPANY
123 BEN HUR AVENUE • WILLOUGHBY, OHIO

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on ORCOID and special booklet on rubber and rubberlike materials

THE OHIO RUBBER COMPANY
123 BEN HUR AVENUE, WILLOUGHBY, OHIO
Send us more information on ORCOID Electrical Laminates

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COMPANY _____

STREET _____

CITY _____ ZONE _____ STATE _____

PLEASE PRINT

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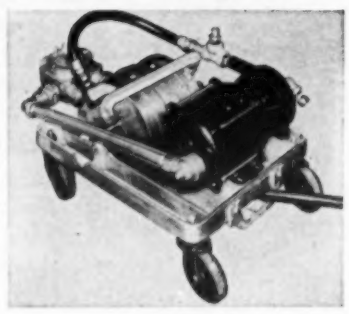
SEWER CLEANER
clears obstructions at 100 ft

Weighing less than 100 lb and capable of fitting into a passenger car trunk, the No. 420 electric Sewer Master cleaner will clear obstructions 100 or more feet from the sewer entrance. Four large rubber-tired wheels and a two-position handle facilitate handling machine. Cutting tools are attached to a coiled spring "snake" which is held and revolved at any convenient distance from the sewer entrance by the revolving chuck jaws. Tools effectively remove roots, grease, chips and other obstructions. A snap switch reverses the motor for operation in either direction. Made by **Oster Mfg. Co.**, 2066 E. 61st Pl., Cleveland 3, O.

For more details circle **NED-360 E3** on enclosed inquiry slip

HOT SPRAY HEATERS
for enamels, paints, plastics



Gearless centrifugal pump designed to handle even the most abrasive paints or other liquids is incorporated in the Circa-Flo Pressurematic hot spray heater. Unit is used for hot application of lacquers, enamels, paints and liquid plastic compounds. Pump is powered by UL-approved explosionproof motor which moves the hot material in continuous circulation from the heater to the spray head and return. Unit is rated at 7 gph at 160° F for the 300 series, and 14 gph at same temperature for the 600 series. Full heat is reached in 5 to 10 minutes. Made by **Spee-Flo Co.**, Dept. NED, 720 Polk Ave., Houston, Tex.

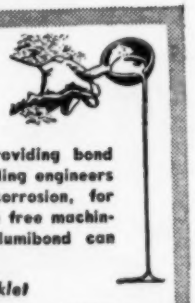
For more details circle **NED-361 E3** on enclosed inquiry slip

DO YOU KNOW? The tire of tomorrow may outlast the life of the car it's on. Recent tests of control tires made of a new polyester rubber indicate from two to five times the wear resistance of tires made with the best tread rubber hitherto available. Shoe soles and heavy duty conveyor belts of this new material also are reported to have extraordinary wear resistance. This material is still in the development stage pending solution of problems of processing by Goodyear Tire & Rubber Co., 1144 E. Market St., Akron 16, O.

For more details circle **NED-362 E3** on enclosed inquiry slip

How to bond steel's **brawn** to aluminum's **lightness**

Alumibond. unique casting of aluminum to ferrous metals



An amazing new process—ALUMIBOND—enables you to combine the best qualities of aluminum and ferrous metals. If you have problems involving heat transfer, joining, weight saving, oxidation resistance, bearing surfaces—Alumibond can do an unusually successful job for you providing bond strength of 18,000 psi at interface junctions. Leading engineers now employ Alumibond to aid resistance to corrosion, for greater conductivity or heat dissipation, for more free machinability. In hundreds of similar applications, Alumibond can solve your design and production problems.

Write today for new Alumibond booklet

ARTHUR TICKLE ENGINEERING WORKS
20 Delevan St., Brooklyn 31, N.Y. **MAin 5-4200**

For more details circle **NED-363 E3** on enclosed inquiry slip

CUT DRAWING BOARD TIME

on PLANT LAYOUTS

Now you can "draw" material conveyors, structural components, center lines, etc., simply by unrolling printed self-adhering tapes and mounting them on your layouts. Many different symbols are available, all predrawn and ready for application.

The CHART-PAK plastic board provides an ideal surface for layouts—easy to use and reuse, washable, durable, neat.

With CHART-PAK you will have faster planning and better layouts, at lower costs.

Write for descriptive bulletin.

ATTACH TO YOUR LETTERHEAD
Please send me full information about the CHART-PAK method for:
☐ Plant Layouts ☐ Organization Charts
☐ Office Layouts ☐ Graphic Charts
104-D

CHART-PAK, INC.
104-D Lincoln Ave., Stamford, Conn.

For more details circle **NED-364 E3** on enclosed inquiry slip

with Veelos on your machines
v-belt adjustment is a production-saving job

ALL V-BELTS STRETCH. With endless v-belts there's nothing you can do to take up this stretch once the motor has been "run-out". But with Veelos the adjustment is in the belt itself—even sliding motor bases are unnecessary.

Changing the length of each Veelos v-belt by just adding or removing links is the best, most efficient, way to keep the belts correctly matched. Using Veelos means that the job of adjustment is done easily and quickly... with the least amount of machine down-time.

Write for your copy of the Veelos Data Book—it gives file-worthy product and engineering facts which you should have handy. We'll be glad to send you a copy.

VEELOS THE LINK V-BELT

MANHEIM MANUFACTURING AND BELTING CO.
650 Manheim Street, Manheim, Pa.

Adjustable to Any Length • Adaptable to Any Drive

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nylon
MAINTENANCE PARTS...
FAST...without mold costs!

Now, when you need maintenance parts fast...and these parts call for the advantages of nylon (light weight, wear resistance, heat and corrosion resistance)—you can make them quickly, *with no mold cost!*

POLYPENCO nylon standard shapes are the answer. Ideal for gears, bushings, bearings, insulating shafts, washers, etc. Available in rod, strip, tubing. Easily fabricated on standard metal working tools. Quick delivery from stock. Write for bulletin, listing technical information or prices. The Polymer Corporation of Pennsylvania, Reading, Penna.

POLYPENCO® NYLON

nylon and teflon* / stock shapes...finished parts
also available to your specifications

In Canada: C-H Engineering Company • Montreal • Toronto
*registered trademark of the Du Pont Company

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AMES

No. 2 Dial Comparator

This is smallest in the Ames' line of high quality dial comparators. It is ideal for desk or bench use in the fine inspection of small precision parts. Light in weight, its broad base makes it very stable. The capacity approximates that of the regularly supplied Ames No. 202 Dial Indicator which has a 0-100 dial, graduated in .001", with a .250" range. If your job requirements differ, you can have the No. 2 with any Ames "Hundred Series" Dial Indicator. Send for details.

Send today for your free copy of Catalog No. 58

Representatives in principal cities. B. C. AMES CO. *34 Ames Street Waltham 54, Mass.*

Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

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LOUDNESS REDUCED 50%*

Inside a Burgess-Manning Acousti-Booth

- The hushed interior of a Burgess-Manning Acousti-Booth provides a quiet, restful place to hear well.
- Light, sturdy construction for ease of moving . . . compact design.
- Doorless construction . . . light, airy, well ventilated.
- Wall and floor models.
- Suited to any noisy location.

** Based on studies by a prominent research organization.*

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BURGESS-MANNING COMPANY

Architectural Products Division

5970-C Northwest Highway, Chicago 31, Illinois

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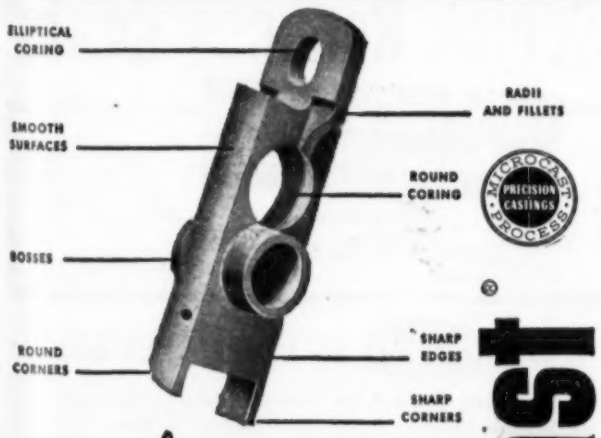

unlimited *design* possibilities

The Microcast Process of precision investment casting opens new fields of design to the product development engineer. Tough, virtually non-machineable high-heat metals and alloys can now be incorporated economically into your product's design through the Microcast Process. Design for little or no machining—for better parts at less cost—for longer life, and for functional improvements from the use of better metals and alloys. Write for booklet on Microcast—Also new color movie available without charge.

MICROCAST DIVISION | **Austenal Laboratories, Inc.** 224 East 39th Street, New York 16, New York 7001 South Chicago Ave., Chicago 37

microcast

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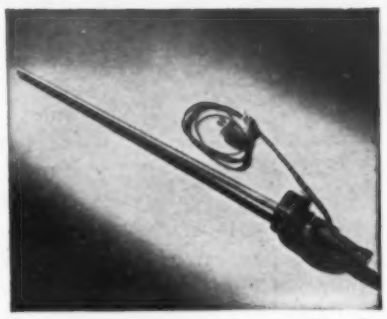
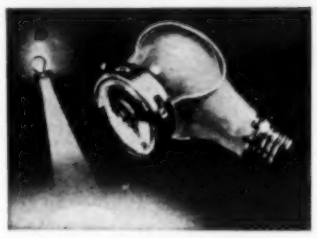
BOLT HEATER
in ratings from 1000 to 6200 w



Greater bolt stressing is possible in large hollow holding bolts through use of the Corox bolt heater supplied in ratings from 1000 to 6200 w, all at 120 v. As bolts cool, flanges draw together to make leakproof joints. Various sizes of heating elements allow use for bolts 1 to 3 ft long with hole diameters from ½ to 1 in. Heaters can also be used for heating die blocks and large metal plattens. Holes in bolts or studs can be drilled while fabricating or during a shut down after installation. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

▲ For more details circle **NED-370 E3** on enclosed inquiry slip ▲

LIGHT INTENSIFIER
eliminates eye strain



Lens of this light intensifier snaps firmly on a 25, 50, or 100-watt bulb and directs a powerful concentrated beam where it is needed. Tests show that the brightness of illumination at the desired point is tripled. The attachment may be easily adjusted to any desired position. Made by the **Light Intensifier Co.**, 716-NE Van Dyke Ave., Detroit 14, Mich.

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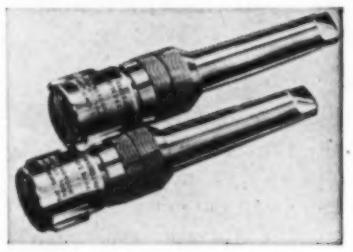
FLOATING REAMER
for through and blind holes



Accuracy of bore and concentricity and a smooth surface can be obtained through use of Wickman - Brown floating reamer. Blades can be sharpened or renewed, with floating action being constant throughout the full range of the tool. S type reamer has standard blades, while SL type has blades for reaming blind holes. Blades are either high speed steel or are tungsten carbide tipped. Fourteen sizes range from ¾ to 4 in. diameters. Size can be hand adjusted by anyone who can read a micrometer by turning the direct reading micrometer adjustment to the proper setting. Made by **Wickman Mfg. Co.**, 10327 Capital Ave., Detroit 37, Mich.

▲ For more details circle **NED-372 E3** on enclosed inquiry slip ▲

THE CINCINNATI Wet Abrasive Cut-Off Machines

Cut Down ON CUT-OFF TIME!

Cut any metal, solids or tubing fast and accurately! Capacity up to 2-¼" in solids, 3-½" in tubing. Straight or angle cuts up to 45°. And look at these speeds: 2" bar stock in 15 seconds . . . 2" tubing, 3/32" wall, in 10 seconds . . . 2" angle iron, ⅛" thick, 45° angle, in eight seconds. Special features include Cincinnati's exclusive water nozzle, insuring proper coolant flow for longer wheel life; and foot-operated vise, freeing operator's hands for faster production. Write today for Bulletin 53GD.

TRADE *The Cincinnati* MARK

THE CINCINNATI ELECTRICAL TOOL CO.

Division of THE R. K. LeBLOND MACHINE TOOL CO.

CINCINNATI 8, OHIO

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THE **HI-GAIN Industrial POCKETSCOPE** ®BY WATERMAN

MODEL S-14-A

Identified by its hi-sensitivity and incredible portability, S-14-A POCKETSCOPE now permits "on-the-spot" control, calibration and investigation of industrial electronic, medical and communications equipment. Direct coupling without peaking, used in the identical vertical and horizontal amplifiers, eliminates undesirable phase shifting. Designed for the engineer and constructed for rough handling.

Wt. 12¾ lbs. 12" x 5¾" x 7"

Vertical and horizontal channels: 10mv rms/inch, with response within—2DB from DC to 200KC and pulse rise of 1.8 μs. Non-frequency discriminating attenuators and gain controls with internal calibration of trace amplitude. Repetitive or trigger time base, with linearization from ½cps to 50KC with ± sync. or trigger. Trace expansion. Filter graph screen. Mu metal shield. And a host of other features.

WATERMAN PRODUCTS CO., INC. PHILADELPHIA 25, PA.

CABLE ADDRESS: POKETSCOPE

WATERMAN PRODUCTS INCLUDE.

S-4-A	SAR	PULSESCOPE
S-5-A	LAB	PULSESCOPE
S-10-B	GENERAL	POCKETSCOPE
S-11-A	INDUSTRIAL	POCKETSCOPE
S-14-B	WIDE BAND	POCKETSCOPE
S-15-A	TWIN TUBE	POCKETSCOPE

Also RAKSCOPES, LINEAR AMPLIFIERS, RAYONIC TUBES and other equipment

WATERMAN PRODUCTS

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THESE TRUCKS ROLL UP A LOT OF USEFUL MILES . . . on Mono-Cushions

Mono-Cushions are sure-footed, stable on the short turns. They protect floor surfaces from the heavy pounding of heavily-loaded vehicles. **Mono-Cushions** reduce the effort required to maneuver the trucks and protect the operators from "road shock."

Pound for pound, choose a lift truck and size for size, choose a **Mono-Cushion.**

Follow the lead of the manufacturer of your truck. When you need tire replacements, order Mono-Cushions from your truck service man. He knows your trucks best.

THE **MONARCH** RUBBER COMPANY

501 Lincoln Park • Hartville, Ohio

SPECIALISTS IN INDUSTRIAL SOLID TIRES AND MOLDED MECHANICAL RUBBER GOODS

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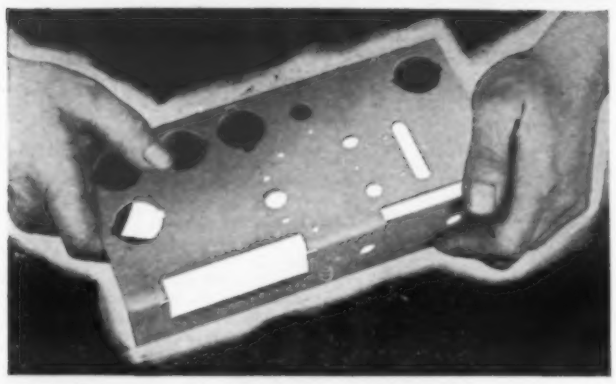

COPPER-PLATED PARTS STAY BRIGHT AND CLEAN

when Coated with WATER DIP #33

Here's a simple, low-cost finish that keeps copper-plated surfaces bright, free from fingerprints, chemically clean. It's M & W Water Dip #33. Work goes directly from the last hot water rinse into Water Dip #33—no need for rehandling and drying!

For the complete story on Water Dip #33, write for Bulletin #117, or let our M & W technical consultant discuss your requirements privately with you.

PIONEERS IN PROTECTION

MAAS & WALDSTEIN CO. 2121 McCARTER HIGHWAY NEWARK 4, NEW JERSEY

Midwest Div.: 1658 Carroll Ave., Chicago 12, Ill. - Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.

MANUFACTURERS OF INDUSTRIAL FINISHES

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B.F.Goodrich

TW TIRE AND WHEEL ANALYSIS cuts industrial tire failures, saves you up to 50% on tire costs

● What caused your last industrial tire failure? Overloading, oily floors, rough hauling surfaces—all possibilities—or was it the *tires themselves?* If so, chances are that with the *right* tire you can increase tire life—perhaps even double it. Like the equipment they carry, industrial tires are designed to do specialized jobs. Point is, get the specific tire and job together.

B. F. Goodrich has developed the Tire and Wheel Analysis Plan to help you do just that. Without obligation, a trained BFG man will study your materials handling operations and recommend the right tires for you to use. His advice will be impartial, for B. F. Goodrich makes, and BFG retailers sell, a complete line of industrial tires.

Use the tires designed for the job and you'll save as much as 50% on tire and wheel costs through greater materials handling efficiency, less expensive maintenance and repair time.

To find out more about this free B. F. Goodrich Tire and Wheel Analysis Plan, send in the coupon or call your BFG retailer. A special TW Analysis Plan is available for manufacturers of industrial handling equipment.

Always specify B. F. Goodrich tires when ordering new equipment

The B. F. Goodrich Co.
Department TW-57, Akron, Ohio.
Please send me:
☐ *Additional information* on your new Tire and Wheel Analysis Plan
☐ A free copy of your "Industrial Tire Guidebook".
Name _____
Title _____
Company _____
City _____ State _____

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

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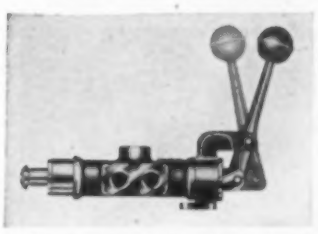
AIR CONTROL VALVE

has two controls in single body

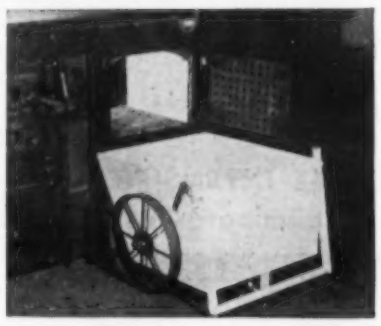


Full control of stroke of air cylinders is provided by this air control which has two speed controls built into single body. Simple piping is afforded. Control is available as standard four-way piped exhaust in ⅜-in. size. Assemblies available for actuating valve are knob, lever, clevis, treadle foot, cam, cylinder, solenoid and diaphragm types. Made by **Valvair Corp.**, 947 Beardsley Ave., Akron 11, O.

For more details circle **NED-378 E3** on enclosed inquiry slip

ASH CART

also can handle machine shop parts

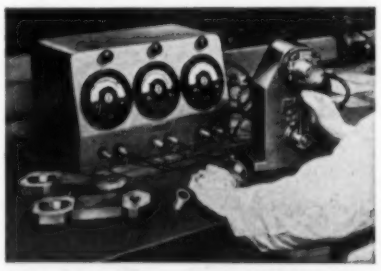


Back-breaking operation of shoveling ashes is eliminated by this ash cart, designed to receive ashes directly from the average 20-in. high grate line. The handle folds down for easy access to the wire door. Capacity of the truck is over 5 cu ft. It has large wheels for safe handling over rough floors and can also be used to handle machine shop parts and other items and materials. Made by **American Coal Burner Co.**, 18-V E. Erie St., Chicago 11, Ill.

For more details circle **NED-379 E3** on enclosed inquiry slip

COMPUTING INDICATOR

instrument simplifies measurement



Use of the Comp-AIRator, a computing air gage indicator, makes it possible to remove one of the variables affecting measuring of complex parts at several places. In effect, the diameter variable is removed from the results shown by the indicator for value of angle of taper, concentricity and clearance, by applying the diameter variation to both sides of the differential measuring device. This nullifies its effect on the dial reading. Readings for these dimensional characteristics are obtained on a single dial with a single pointer. Photo shows three computing indicators checking the center distance, bend and twist of a connecting rod. Made by **Taft-Peirce Mfg. Co.**, 11 Mechanic Ave., Woonsocket, R. I.

For more details circle **NED-380 E3** on enclosed inquiry slip

IT COSTS LESS TO USE THE BEST!

PLS

1. Takes less PLS to give a perfect seal.
2. One compound for many services: water...oil...gas...steam...chemicals...petroleum products—low and high pressures.
3. Never washes out—one application lasts forever.
4. Never hardens: joints may be easily broken after years of service—no damaged connections.

Prove it to yourself. Send for a free sample. Crane Packing Company, 1811 Cuyler Avenue, Chicago 13, Ill.

JOHN CRANE CRANE PACKING COMPANY

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CINCINNATI ALL-STEEL SHEARS

are equipped with hydraulic hold downs, 4 edge knives, steel frames, precision gauges and other features.

From 10 ga to 1¼" capacity
4' to 24' in length

Write for Catalog S-6

THE CINCINNATI SHAPER CO.
CINCINNATI 25, OHIO, U.S.A. SHAPERS • SHEARS • BRAKES

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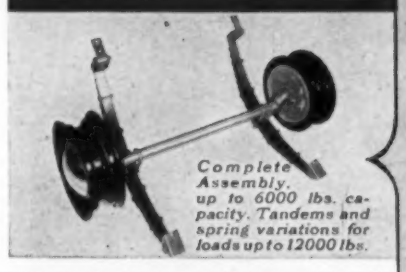
CUT COSTS WITH COMPLETE UNDERCARRIAGE ASSEMBLIES



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PUMPS • HEATERS
WELDING UNITS
CONCRETE MIXERS
SPRAYERS
SPREADERS
PORTABLE TANKS
PAINTING EQUIPMENT
FARM AND ROAD MACHINERY
BOAT TRAILERS
LIVESTOCK BODIES
AIRPORT AND PUBLIC UTILITY EQUIPMENT

Eliminate the time and labor wasting of buying and assembling separate parts to build a makeshift undercarriage.

Get precision engineered undercarriage construction ideally suited for your individual transport needs.

Let us analyze your requirements and send you an engineering recommendation for your portable equipment.

FAYETTE Precision Built UNDERCARRIAGES

WRITE TODAY FOR COMPLETE SPECIFICATIONS

FAYETTE MANUFACTURING COMPANY, 410 FRONT STREET, FAYETTE, OHIO

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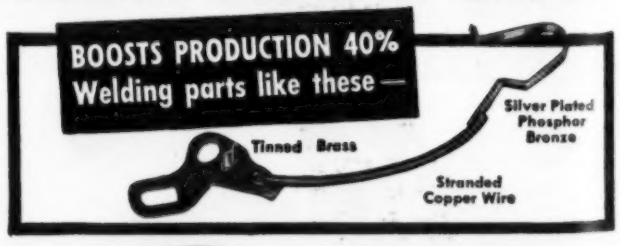
Schick Reduces Costs

BOOSTS PRODUCTION 40% Welding parts like these—



with RAYTHEON WELDPOWER*

Speaking for Schick Incorporated, makers of Schick Electric Shavers, assembly foreman A. Maravnick says: "We cannot be too enthusiastic about equipment that does such a fine job! Raytheon WELDPOWER has eliminated soldering on this operation, increased production 40%. The operator's comment is *what a beautiful set-up* and the Inspection Department is also highly pleased."

Investigate the many advantages of welding ferrous, non-ferrous or dissimilar metal parts with Raytheon Condenser Weldpower Control Units. Available in 3 sizes with appropriate Weldpower Heads. Send sample parts or write for details.
Address Dept. NE-5

*Reg. U. S. Pat. Off.

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Excellence in Electronics
RAYTHEON MANUFACTURING COMPANY
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INTERNATIONAL DIVISION, 19 RECTOR STREET, NEW YORK CITY

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...can also provide a more efficient shipping container for YOUR product

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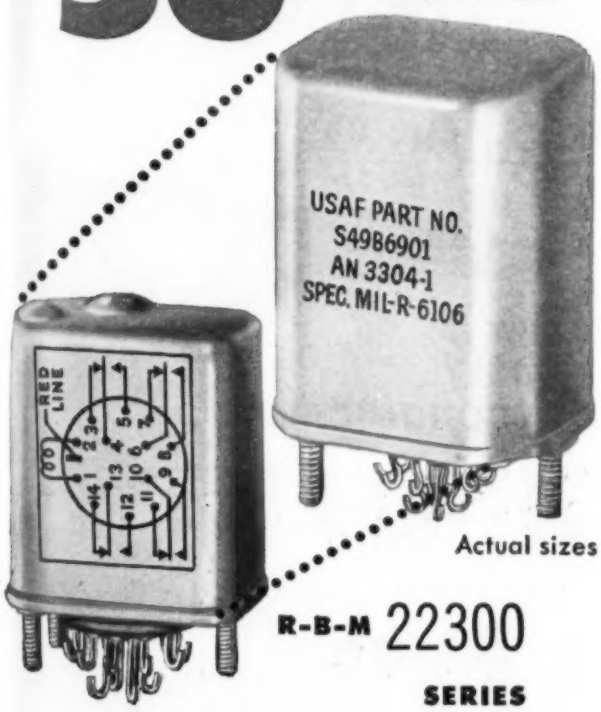


Actual sizes

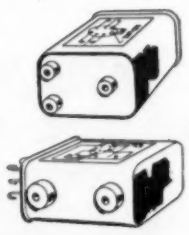
R-B-M 22300 SERIES

Hermetically Sealed Relays

The R-B-M 22300 hermetically sealed telephone type relay is the electrical and mechanical equivalent of AN 3304-1, except for smaller size and mounting dimensions.

An improved armature design, plus high temperature molded nylon coil bobbin, provides greatly improved magnetic efficiency and enables R-B-M to reduce the overall size of the relay. The R-B-M 22300 design still retains palladium cross-bar contacts identical to those used in the larger size.

Maximum contacts—6 Form A and 4 Form C—3 ampere 28 Volts. D. C. coil construction only. Maximum coil resistance 5000 ohms. Minimum power .75 watts. Also available in AN 3304 can for dynamotor or low capacitance application.



Optional Mounting Arrangements

Write Dept. K-5 for ASR Bulletin.

R-B-M DIVISION ESSEX WIRE CORP. Logansport, Indiana

MANUAL AND MAGNETIC ELECTRIC CONTROLS FOR AUTOMOTIVE, INDUSTRIAL, COMMUNICATION AND ELECTRONIC USE

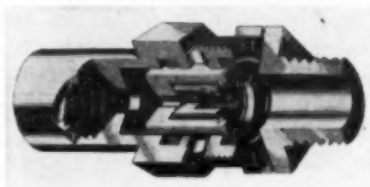
For more details circle NED-386 E3 on enclosed inquiry slip

RADIAL BALL BEARINGS for speeds of up to 5000 rpm

Precision radial bearings, designated as series C, are of solid race type with ball retainers and are made in inch dimensions corresponding to established light duty inch standard sizes. They are designed for light duty radial, thrust or combined load applications and speeds up to 5000 rpm. Bearings have ground and polished raceways and chrome alloy balls. They are available without shields, single shielded or double shielded. Made by **Nice Ball Bearing Co.**, 2926 Hunting Park Ave., Philadelphia 40, Pa.

For more details circle NED-387 E3 on enclosed inquiry slip

QUICK-RELEASE VALVE handles 0 to 250-psi air pressure

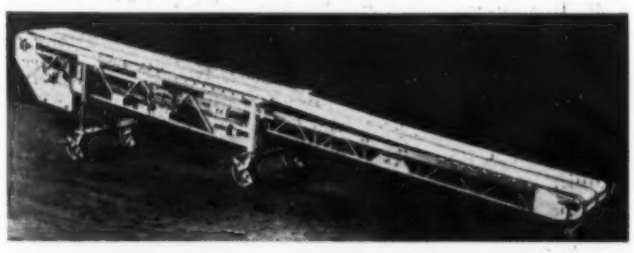


Air pressures from 0 to 250 psi for pneumatic clutches up to 1500 hp are handled by this quick-release valve. Unit's light weight and compactness allow its use on rotating elements without disturbing dynamic balance. Possibility of pressure equalization responsible for chatter and caused by accidental removal of orifice from line is eliminated by built-in orifice. Double-piston design assures smooth, quick-release action. Construction of valve eliminates need for a spring. Made by **Deublin Co.**, Dept. A, 1155 Waukegan Rd., Glenview, Ill.

For more details circle NED-388 E3 on enclosed inquiry slip

EXTENSION BELT CONVEYOR adjusts to suit varying conditions

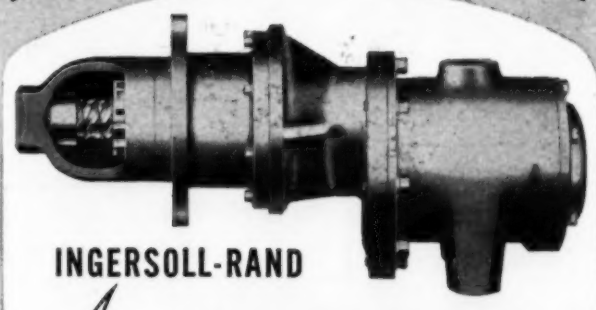
Readily adjusted high or low, short or long, or at any angle in either direction, Expand-O-Veyor is power belt unit. It is currently available in two sizes



which are adjustable from 11 to 18 ft and 15 to 25 ft in length. Locking wheels provide for portability and flexibility of use. Made by **Oliver Corp.**, A. B. Farquhar Div., Dept. A-04, 142 N. Duke St., York, Pa.

For more details circle NED-389 E3 on enclosed inquiry slip

NO BATTERIES TO WORRY ABOUT!



INGERSOLL-RAND

Air STARTING MOTORS

give you trouble-free engine starts

RELIABLE—I-R Air Starting Motors are built for fast, sure engine starting—anywhere.

LOW COST—No batteries, generators or electrical parts to buy. Practically no maintenance expense.

COMPACT—I-R Air Starting Motors are lightweight, small but powerful. For all popular gasoline and diesel engine sizes. Easily installed.

Ask your engine distributor to show you the I-R Air Starting Motor line. Or write for Bulletin 5094A.

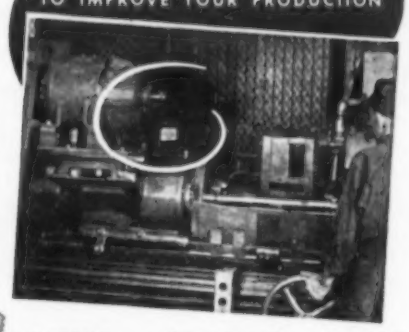
867-18A

INGERSOLL-RAND 11 Broadway, New York 4, N.Y.

For more details circle NED-390 E3 on enclosed inquiry slip

By Makers of RELIANCE Precision-Built MOTORS

A QUALITY-BUILT ELECTRIC SPEED INDICATOR TO IMPROVE YOUR PRODUCTION



UNDER $50 COMPLETE (in quantities of 10)

- IMPROVES quantity and quality of machine output.
- DETECTS machine troubles before costly repairs become necessary.
- REDUCES spoilage of materials in process.

This sturdy instrument gives accurate speed indications between 100 and 5000 rpm.—special scales available for other indications. Get all the facts—write for Bulletin A-2406 today! A-52

RELIANCE ELECTRIC AND ENGINEERING CO. 1082 IVANHOE ROAD • CLEVELAND 10, OHIO

Sales Offices in Principal Cities

For more details circle NED-391 E3 on enclosed inquiry slip

JOHNSON BEARINGS in over 900 standard sizes

• You can secure virtually any size sleeve bearing you need from your local Johnson Bearing Distributor. He handles the widest range of sizes on the market . . . from ¼ inch to 4½ inch ID, the wall thickness you need and the right length. You'll save time with Johnson General Purpose Cast Bronze Bearings . . . and save money, too.

JOHNSON BRONZE CO. 580 So. Mill St., New Castle, Pa.

OTHER BEARING TYPES Electric Motor • Graphited • Self-Lubricating Powder Metallurgy • Universal Bronze Bars • Babbitt.

JOHNSON JB BEARINGS Sleeve-Type

WRITE TODAY for your copy of the new catalog

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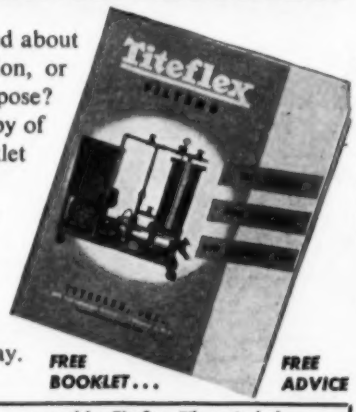
REDUCE FILTRATION TROUBLES!

Need a filter but worried about filtration costs, operation, or suitability for your purpose? Then get your Free Copy of the Titeflex® Filter Booklet right away.

Ask for a Titeflex Engineer to set you straight on costs and equipment for your special needs. No obligation. Mail coupon today.



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Let Our Family of Products Help Yours

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TITEFLEX, INC. 507 Frelinghuysen Ave., Newark 5, N. J.

☐ Please send me a copy of your Free Booklet about Titeflex Filters.

☐ We need the advice of a Titeflex Filtration Engineer . . . without obligation on our part.

NAME ____

TITLE ____

COMPANY ____

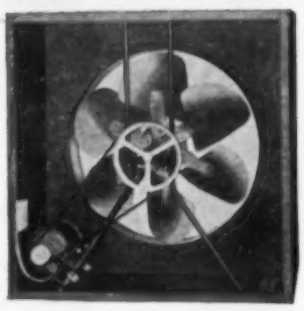
ADDRESS ____

CITY ____ ZONE ____ STATE ____

For more details circle NED-393 E3 on enclosed inquiry slip

Industrial ventilating Power with quietness

Reed COMMERCIAL and INDUSTRIAL FANS



For cooling and ventilating large areas, for rapid air changes, for problem installations where space is at a minimum, choose the Reed RUF-C commercial fan. They are rugged, super-quiet, with power to spare. Reed quality means a lifetime of trouble-free service.

Cat. No.	ASHVE CFM* Free Air	ASHVE CFM* 10" S.P.	Overall Dimensions	Motor 115v.-60cy. Single Phase	Blade Speed RPM	Shipping Weight
RUF-24C	5,000	4,240	36" x 36" x 14"	¼ hp	695	130 lbs.
RUF-30C	7,800	6,740	42" x 42" x 14"	⅓ hp	541	150 lbs.
RUF-36C	11,000	9,650	48" x 48" x 16"	½ hp (115/230v.)	475	183 lbs.
RUF-42C	15,000	11,400	52" x 52" x 16"	½ hp (115/230v.)	350	220 lbs.
RUF-42CX	17,100	13,600	52" x 52" x 16"	¾ hp (115/230v.)	394	230 lbs.
RUF-48C	22,250	17,900	58" x 58" x 16"	1 hp (115/230v.)	359	270 lbs.

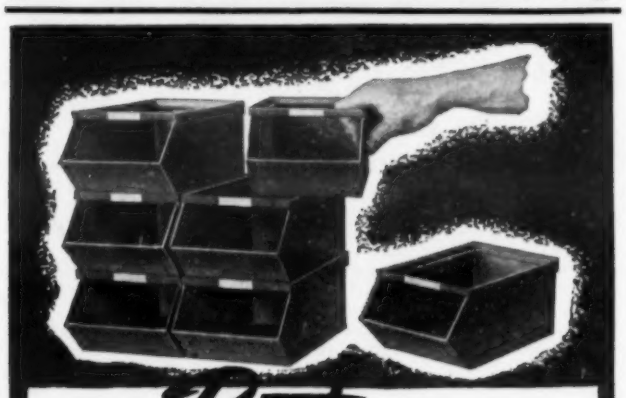
*Certified Air Deliveries

Single Phase motors standard. Other type motors available.

Reed UNIT-FANS, INC.
1001 SAINT CHARLES ST., NEW ORLEANS, U. S. A.

WRITE FOR DETAILS TODAY

For more details circle NED-394 E3 on enclosed inquiry slip



Parts...

★ Where You Want Them...

★ When You Want Them

You'll save time, space and labor handling parts and material when you use these patented STACKBINS.® STACKBINS keep parts instantly accessible—eliminate waste hand motions—stack compactly to form units of exactly the right shape and capacity—make order filling or assembly work faster, easier, more efficient. Heavy steel, all-welded construction. Sizes from 3½" x 6" x 3¼" to 15" x 24" x 11".

Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main Street, Pawtucket, R. I.

STACKBIN SYSTEM
"Stacked and Still Accessible"

For more details circle NED-395 E3 on enclosed inquiry slip

Pattern Shown ½ Actual Size

GET BOTH WITH A.W. SUPER-DIAMOND

Where safety *and* economy are important, choose A.W. SUPER-DIAMOND Floor Plate. No other flooring gives you more foot safety, ease of maintenance, durability—at such low cost!

SUPER-DIAMOND's exclusive, engineered raised-diamond pattern puts 40 anti-skid traction points in every footstep. SUPER-DIAMOND is easy to clean with hose, mop or broom—has no cracks or corners to catch and hold dirt. SUPER-DIAMOND withstands hard blows and heavy loads—resists heat, fire and most chemicals. And you get all these advantages at *no premium price.*

Learn the facts about SUPER-DIAMOND foot safety and economy today. Mail the coupon for our newest booklet on floor safety.

A.W. SUPER-DIAMOND
ROLLED STEEL FLOOR PLATE

ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

Please send me, without charge, your latest booklet SD-44 on SUPER-DIAMOND safety.

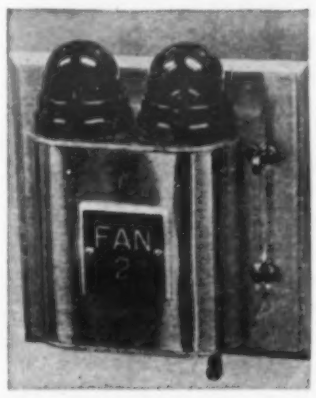
*Name*_____

*Company*_____

*Address*_____ *City*_____ *State*_____

For more details circle NED-396 E3 on enclosed inquiry slip

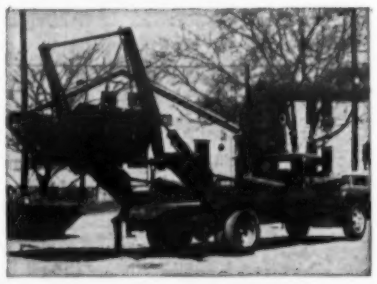
AUTOMATIC ALARM UNIT signals abnormal machine condition



Any machine or equipment that has a contact to initiate an alarm can be supervised by model A Vigilarm, a packaged automatic warning device. Designed for flush or surface mounting on standard outlet boxes, completely wired unit needs only connection to trouble contacts, audible signal and to power. An abnormal condition illuminates both red and green lamps and sounds audible signal. Flicking toggle silences the alarm and extinguishes green lamp. When contacts restore to normal, alarm is sounded again, red lamp is extinguished and green lamp is lighted. Operation of toggle again silences the signal and extinguishes green lamp, indicating return of contacts to normal. Although each unit is an annunciator in itself, any number of units can be added. Standard units are for 115-v ac operation. Made by **H. R. Kirkland Co.,** 8010 King St., Morristown, N. J.

For more details circle NED-397 E3 on enclosed inquiry slip

BULK & PALLET HANDLING system is truck-mounted and offered in four capacities



The Load Lugger is a truck-mounted hydraulic hoist with multiple detachable bodies, used for bulk and pallet handling in and out of the factory. One truck with various available bodies can be used to replace several trucks and at the same time reduce manpower, as truck driver is only labor required to move material. Model CH-150 handles 4500 lb payloads and can be used with pallets or bulk open or enclosed containers.

Model CH-600TF handles 18,000 lb and can dump bulk containers into a hopper car or pick up 8 ft below grade. It accommodates pallet or bulk containers. Two bulk containers transporting 13 tons, or pallets are handled by model CH-600T, while model CH-650 moves cable reels or bulk container with 10-ton payload. Latter unit works from sides or end. Bulk containers with capacities from 1½ to 20 cu yd are available in a wide variety of types for specific conditions. Made by **Brooks Equipment & Mfg. Co.,** 28 Davenport Rd. S. E., Knoxville, Tenn.

For more details circle NED-398 E3 on enclosed inquiry slip

SCRAPE OR SCRUB

WITH THIS ONE HILD MACHINE

Scrape off hard-caked grease and dirt . . . scrub away dangerously slippery oil with this one powerful HILD Floor Machine. With Power-Scraper attachment the HILD Machine saves hours of chipping with a hand-spud. No danger of marring floor surface or of loosening wood blocks. With Shower-feed Brush, the HILD Machine is equally speedy and thorough in scrubbing away slippery oil film . . . easily reaches "danger spots" around, beneath and between machines. Six models with brush spreads from 11 to 19 inches.

Only HILD has the SHOWER-FEED BRUSH

Cleaning solution flows from tank on handle through holes in brush back *between each row of bristles* ...for thorough scrubbing with utmost economy.

Ask for FREE Demonstration

Write for FREE Circular

HILD System
MAINTENANCE EQUIPMENT & SUPPLIES

HILD FLOOR MACHINE COMPANY
Dept. NE-5 740 W. Washington Blvd., Chicago 6, Ill.

For more details circle NED-399 E3 on enclosed inquiry slip

KENT presents a sturdy truck to carry the Kent Suction Cleaner and extra dirt receptacle!

for WET or DRY work!

Units installed on truck or removed in a jiffy, no tools required. Cleaner quickly available for separate use, including as a blower! Tension spring holds adjustable handle in position shown when not pulling truck. Automatic shut-off valve operates when BOTH tanks are full of liquid — none can enter fans or motor!

Over 40 Year — Serving the World with Quality Equipment

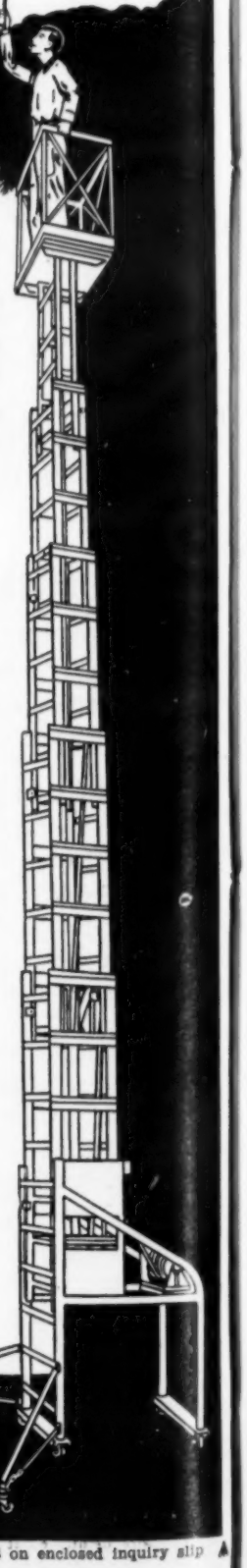
Full information upon Request

CLEAN WITH KENT EQUIPMENT

The KENT Company, Inc. • 449 Canal Street • Rome, N. Y.

For more details circle NED-400 E3 on enclosed inquiry slip

UP! UP! UP!
TO ANY DESIRED HEIGHT



EASILY...
SAFELY...
ECONOMICALLY

HI-LIFT

EXTENSION

SCAFFOLD

Models extend from 6 ft. 10 in. (can be made lower) to any desired height. Hand or electrically operated. Comes to you ready for work — no erection required, no loose parts. Built to meet individual requirements. Ideal for painting, lighting, cleaning, and all overhead maintenance. Pays for itself in time and labor saving.

Also Makers of
HI-LIFT PORTABLE WORK PLATFORM
and
ATLAS PORTABLE LOADING PLATFORM

Write for Complete Literature

ATLAS INDUSTRIAL CORP.
853 - 39th Street
Brooklyn 32, N. Y.

For more details circle NED-401 E3 on enclosed inquiry slip

"Years of service—and over a million operations a year"
D. W. Onan & Sons Inc.

AGASTAT
light . . . versatile
TIME DELAY RELAYS

AGASTATS are used by Onan to prevent starting of their standby plant on momentary power failure, to prevent stopping of the plant until power has returned for a given time, and on some lugging presses that operate over a million times a year. Onan reports several years of service with a minimum of attention.

AGASTATS are solenoid actuated and pneumatically timed. They are light, compact, dustproof and can be furnished to operate mounted in any position. There is an AGASTAT model that is right for your needs.

Write for Bulletin Dept. A2-55

AGA

Division of Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth 3, New Jersey

For more details circle NED-402 E3 on enclosed inquiry slip

3 Complete Lines
OF
TRUMBULL SAFETY SWITCHES

The Trumbull trade mark on any switch means top quality in its class. Now the three styles described below make it easier than ever to be sure you get the best buy for your requirements in any application up to 200 amperes, 600 volts AC or DC.

Heavy Duty Industrial: Trumbull Style HCI Front Operated Safety Switches exceed NEMA Type A Standards, are deliberately designed and built to meet today's heavy industrial requirements. Unsurpassed for ease of installation, operating and maintenance advantages, and safety features.

Standard Duty: Trumbull Style HCI Side Operated Safety Switches meet NEMA Type A Standards, will serve most applications with plenty to spare.

General Use: Trumbull Style D Safety Switches meet NEMA Type D Standards, are designed for distribution and branch circuits, service entrance, and other jobs where service is not severe.

See your Trumbull Distributor or write direct for Bulletins.

TRUMBULL (T) ELECTRIC

DEPARTMENT OF GENERAL ELECTRIC COMPANY
PLAINVILLE, CONN.

For more details circle NED-403 E3 on enclosed inquiry slip

Exactly how much weight do you throw?

Ten inch ounces or 2000 ft. lbs.? Whatever it is, it pays to know when tightening nuts, bolts, screws, or studs. And with Apco Mossberg Torque Wrenches you can know . . . instantly and precisely!

Like no other torque wrench of comparable size or style, an Apco Wrench measures the exact final tension on precision fasteners with the slightest pressure on the handle. Your dial readings are instantaneous and unerringly accurate . . . there are no springs or intricate parts to get out of order. Your work is made easier . . . large, quick-vision numerals and narrow heads simplify measurements in awkward places. Best of all, with Apco there's a wrench for every job in the shop — a complete range of sizes, from 280 inch grams to 2000 ft. pounds.

It pays to standardize with Apco Mossberg Torque Tools for Industry. Write today for complete details.

APCO MOSSBERG CO.
ATTLEBORO, MASS.

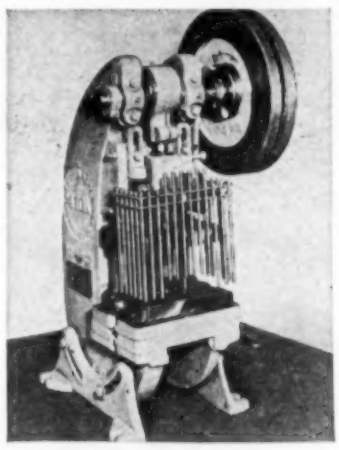
For more details circle NED-404 E3 on enclosed inquiry slip

SEALED CONNECTORS
resist high temperature and shock

Circuits of hermetically sealed electronic and electrical instruments can be protected under extraordinary conditions by M-7500 series hermetically sealed connectors. They withstand a mechanical shock of 100 g, thermal shock from 500° F in oil to the temperature of liquid air, temperatures as high as 1500° F (when connectors are welded to instrument housings) and a voltage breakdown of over 1000 v. Connectors are also impervious to moisture, salt, oil and acid corrosion, high pressure, rare atmosphere, fungus and vibration. One end is designed to mate with standard AN(MIL) types. Other end has a tapered and serrated surface so that it can be pressed into an instrument housing and mechanically anchored. Made by **General Electric Co.**, Monowatt Dept., 95 Hathaway St., Providence 7, R. I.

For more details circle NED-405 E3 on enclosed inquiry slip

PUNCH PRESS GUARD
can be adapted to various contours



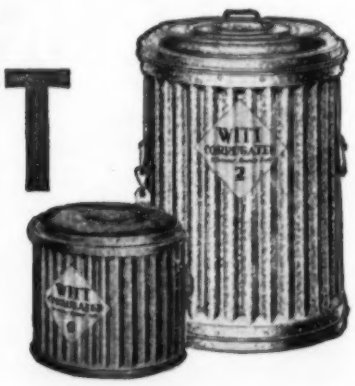
Maximum operator safety is provided, regardless of the die used, by this barrier type punch press guard that does not sacrifice press efficiency. It fits all Benchmaster and other presses. By dropping numerous vertical rods, number of which depends on the bolster plate size, a protective cage is set up around the die area. Virtually any shape contour can be formed by varying the height and position of the rods, held at desired heights by small clips. Guard can also be used with sweep, pull-out and two-hand trip guards. Made by **Benchmaster Mfg. Co.**, Dept. NED-5, 1835 W. Rosecrans Ave., Gardena, Calif.

For more details circle NED-406 E3 on enclosed inquiry slip

Who Else Needs NED?

Is there another engineering, maintenance or specifying official in your company who should be receiving NEW EQUIPMENT DIGEST regularly? If so, just give us his name and title. There's room on the postpaid self-mailing slip which is bound in this issue for you to fill in the necessary information.

If it's a **WITT** *it will* **REALLY** *last!*



WITT CANS and PAILS are designed and constructed to withstand years of hard usage and abuse. Every detail from the special analysis steel to the rust-resisting hot-dip galvanizing reflects the inherent quality of being able to "stand the gaff." Buy WITT and you buy the best quality—more for your dollar than that offered by any similar container regardless of price.

WITT CANS AND PAILS HAVE THE "RIGHT" ANGLE

Compare **WITT CAN** *and* **PAIL** *features with others on these points . . .*

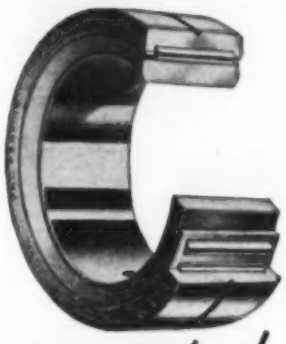
- STRAIGHT SIDES
- DEEP ROLLING CORRUGATIONS
- HEAVY GAUGE STEEL
- STEEL BANDS
- HOT DIP GALVANIZING
- STURDY LID

Witt Cans

THE WITT CORNICE CO.
2124 WINCHELL AVE.
CINCINNATI 14, OHIO
Originators of Corrugated Can

For more details circle NED-407 E3 on enclosed inquiry slip

Look at This
PITCHLIGN
Trade Mark
ROLLER BEARINGS



PITCHLIGN design does away with cocking and skewing by controlling the rollers at their pitch line. This roller control means longer life, far better overall performance. GET THE FACTS! Ask for Bulletin SF-966

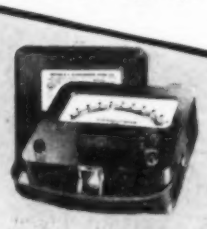
Write Today!

RBC
ROLLER BEARING COMPANY OF AMERICA
SULLIVAN WAY • WEST TRENTON, N.J.

For more details circle NED-408 E3 on enclosed inquiry slip

Specialized and Multi-purpose
INSTRUMENTS
for **RESEARCH·PRODUCTION·MAINTENANCE**

For complex, or just routine measurement jobs, these and other specialized WESTON Instruments save time and assure dependable measurements. For information on the complete line, see your local Weston representative, or write . . . WESTON Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark 5, N. J.



Model 622
Ultra-Sensitive Instruments

Portable d-c and a-c thermo instruments for precision measurement of potentials and minute currents in electronics or laboratory research.

Model 901
Portable Test Instruments

Available in d-c, Model 901—and a-c, Model 904, single and multiple ranges of wide coverage. Excellent scale readability and shielding. Accuracy within ½ of 1%.

Industrial Circuit Tester
Model 785

A multi-range, multi-purpose, ultra-sensitive analyzer, for laboratory and industrial checking of electrical and electronic circuits. Has 28 practical scale ranges; measures d-c and a-c voltage, d-c and a-c current, and resistance. Accessories available to extend ranges. Compact and portable; furnished in either oak or steel case.

High Frequency Electronic Analyzer—Model 769

A three-in-one instrument providing a self-contained Volt-Ohm-Milliammeter, a high impedance electronic D-C Volt-Ohmmeter, and a probe type Vacuum Tube Voltmeter for use to 300 megacycles. Exceptionally stable and accurate. Has specially designed extremely small RF and D-C probes.

WESTON
Instruments

For more details circle NED-409 E3 on enclosed inquiry slip

THE *Workhorse* OF SMALL GRINDERS

Aro Short Grinder Model 7149, 17,000 R.P.M.

ARO does it *faster* . . . at *lower cost!*
That's why Rohr Aircraft at San Diego —and hundreds of other progressive plants today — prefer ARO. Complete line grinders for jet engines . . . also heavy duty vertical and horizontal grinders of all types. Write for new catalog 60.
The Aro Equipment Corp., Bryan, Ohio.
Aro Equipment of Canada, Ltd., Toronto, Ont.

ARO AIR TOOLS

Also . . LUBRICATING EQUIPMENT . . HYDRAULIC EQUIPMENT . . AIRCRAFT PRODUCTS . . GREASE FITTINGS

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For Lubricating Devices Call On GITS First!

GITS Bros. covers the *entire range* of lubricating devices: Oil Hole Covers, Oil Cups, Grease Cups, Bottle Oilers, Gauges. Gravity-Feed, Wick-Feed, Constant Level, Vibrating Rod styles. Threaded or Drive-type. Elbow or Straight.

GITS Bros. offers the most complete selection of standard styles.

GITS consistent quality in design, materials and machining has made Gits Lubricating Devices the standard for industry for more than 40 years.

GITS Lubricating Devices are far-famed for solving tough oiling problems at low cost.

GITS Bros. Engineering Staff—true specialists in lubrication engineering—is at your disposal.

Write today for free illustrated Price Guide Catalog. Use it as your handy reference for lubricating devices.

GITS BROS. MFG. CO.

1833 S. Kilbourn Ave. • Chicago 23, Ill.

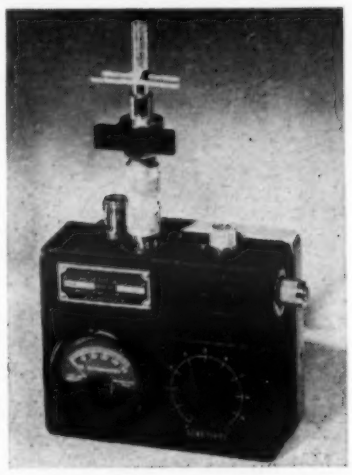
▲ For more details circle NED-413 E3 on enclosed inquiry slip ▲

SISAL BUFFS
specific weaves are uniform

Made from sisal fiber cloth, bias sisal buffs possess uniformity as to specific weave. They range from light to medium weights and from loose, open weaves to very tight crest weaves. Fibers are "permanized" or locked together to reduce fraying and prevent excessive hardness. Both centerless and regular styles with permanent steel or cardboard centers are adaptable for finishing stainless steel, aluminum and ferrous metals. Made by **American Buff Co.**, 2414 S. La Salle St., Chicago 16, Ill.

▲ For more details circle NED-414 E3 on enclosed inquiry slip ▲

PORTABLE FREQUENCY METER
measures frequency and power in range of 2400 to 3400 megacycles

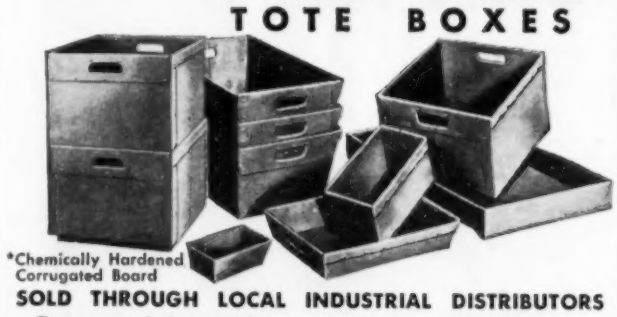


Operating frequency as well as relative power measurements of microwave transmitters or signal sources can be made with this model AET-117 Wavemeter frequency meter. Applicable to pulsed as well as continuous wave systems, meter has range of 2400 to 3400 megacycles. Other ranges are available. Feature is that instrument makes either transmission or reaction type measurements. Two inputs are provided so that either method may be selected.

Measurements can be made by direct coupling, or remotely by means of self-contained directive antenna. Coaxial type UHF jack allows use of oscilloscope to observe rectified output waveform of FM systems. Tuning is accomplished by specially designed micrometer. Wavemeter contains a high "Q" resonant cavity, sensitive crystal type control, potentiometer sensitivity control and microammeter indicator. It will withstand shock and vibration as well as wide range of temperature and humidity. Made by **American Encaustic Tiling Co.**, Electronics Div., 926 Kenilworth Ave., Lansdale, Pa.

▲ For more details circle NED-415 E3 on enclosed inquiry slip ▲

FAMOUS "CHEM-BOARD"* **CONVOY TOTE BOXES**



*Chemically Hardened Corrugated Board

SOLD THROUGH LOCAL INDUSTRIAL DISTRIBUTORS

Cost—weigh—50% to 60% less than steel. A wide range of sizes in standard and custom made NESTING, STACKING, VERTICAL TOTE BOXES. Write for complete information, prices, name of distributor in your area.

CONVOY RECORD STORAGE FILES
Sold Only by YOUR LOCAL STATIONER

Used by most famous names in industry and businesses of all kinds. CONVOY "CHEM-BOARD" files for record storage made in letter, legal, and 12 other sizes. Stack to ceiling, mate together. Call your local stationer or write for name of stationer nearest to serve you.

CONVOY, INC.
Canton 6, Ohio
P. O. Station B, Box 216-N

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Precision Quality
STAINLESS SET SCREWS
18-8 and type 316 . . .
IN STOCK

Stainless Steel Set Screws of all types, in all standard sizes, lengths, and points, *in stock*, ready for immediate shipment to you. What do you need? Socket Set? Slotted or Square Head Set? We have them. We can fill rush orders for them — and for Socket Head Cap Screws, Flat Head Socket Caps, and many other stainless fasteners. Specials made promptly.

Find out how many of your needs we can satisfy. Write, on your letterhead, for our new, 96-page catalog No. L.

MANUFACTURERS SINCE 1929
ALLMETAL
SCREW PRODUCTS COMPANY, INC.
33 GREENE STREET NEW YORK 13, N. Y.

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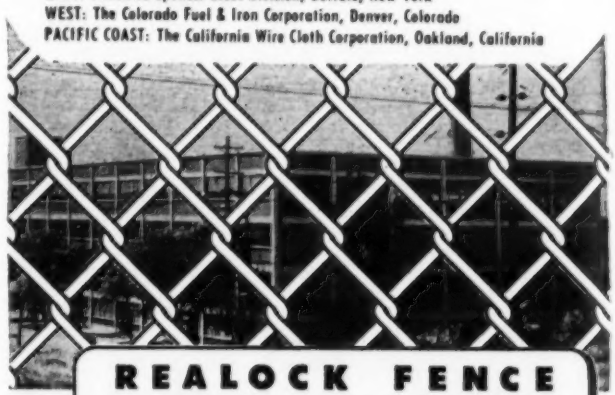
REALOCK FENCE
means what it says

Realock Fence provides real locked-in protection for your grounds and property. All fittings have bolts placed so that nuts are removable only from the inside ...thereby insuring safety from intruders.

Realock Fence is heavily galvanized by a special process...gives weather-resistant, durable service year after year with little or no expense for maintenance. Expert erection service is conveniently available.

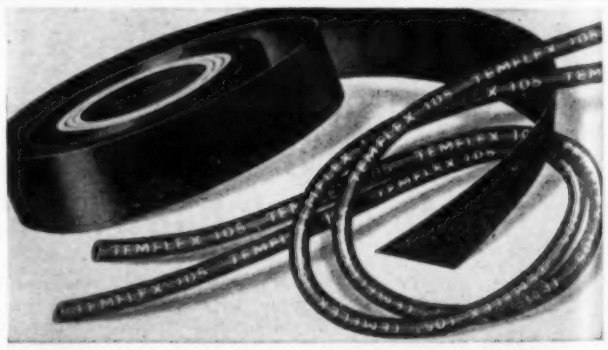
For additional information write our nearest sales office or consult your classified telephone directory.

EAST: Wickwire Spencer Steel Division, Buffalo, New York
WEST: The Colorado Fuel & Iron Corporation, Denver, Colorado
PACIFIC COAST: The California Wire Cloth Corporation, Oakland, California



REALOCK FENCE
THE COLORADO FUEL AND IRON CORPORATION
BRANCHES IN ALL KEY CITIES

▲ For more details circle NED-418 E3 on enclosed inquiry slip ▲



NOW . . . an Irvington Plastic Insulating TAPE with the heat-and oil-resistance of Temflex 105 TUBING

Here is a new plastic insulating tape based on the same formula that has made Temflex 105 Tubing the leader where service calls for continuous operation in air at 105° C.—or in oil at 90° C.

Temflex 105 Tape is strong and flexible, possesses exceptional elongation—can be easily hand wrapped or applied by taping heads over bus bars, coils, cables, irregular surfaces. Made in thicknesses of .007", .010" and .012"; widths from ½" to 34".

You probably know about Temflex 105 Tubing—now write for the facts on Temflex 105 Tape.

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON
VARNISH & INSULATOR COMPANY
14 ARGYLE TERRACE, IRVINGTON 11, NEW JERSEY
Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

▲ For more details circle NED-419 E3 on enclosed inquiry slip ▲

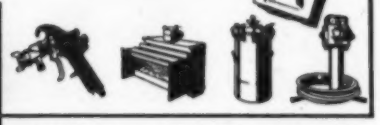
They'll give your painting production the GUN!

You can bank on Binks spray painting guns for smooth finishes and long life because they are backed by 50-plus years of experience. The Binks Model 18 is the finest gun made. It is the choice of leading automobile, furniture, aircraft and other manufacturers who require the finest of finishes.

In addition to the 18, Binks has a complete range of guns to fit any painting purpose or pocketbook.

Ask your jobber for recommendations or literature on Binks guns—or write to Binks Manufacturing Company, 3122-34 W. Carroll Ave., Chicago 12, Ill.

Binks EVERYTHING FOR SPRAY PAINTING



GUNS • SPRAY BOOTHS • MATERIAL TANKS • EXTRACTORS & ACCESSORIES

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

▲ For more details circle NED-420 E3 on enclosed inquiry slip ▲

FOR MATERIAL HANDLING—
more and more—the swing is to wide-base pneumatic tires

GENERAL
INDUSTRIAL PNEUMATIC TIRES

More Designers are specifying wide-base General Pneumatics. They know Generals add these extra selling points to handling equipment.

SAVE TIME • MONEY • LABOR

- MORE LOAD CAPACITY AT LOW OR HIGH SPEEDS
- CUSHION EQUIPMENT AND LOADS REDUCING BREAKAGE AND SPILLAGE
- SAVE HIGH COST FLOORS AND FLOOR SURFACES
- SLOW, EVEN WEAR FOR LONG SERVICE
- HIGH FLOTATION FOR EASIER ROLLING OVER SOFT GROUND
- ROLLS EASIER, SMOOTHER OVER ALL SURFACES

Available separately or in assemblies of Tires, Tubes and Wheels. Size O.D. 8" to 27"—200 to 4000 lbs. cap. for low or high speeds.

Rigid CASTER FORKS Swivel

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

SEND FOR CATALOG . . . DEPT. 4

THE GENERAL TIRE & RUBBER CO. AKRON, O.

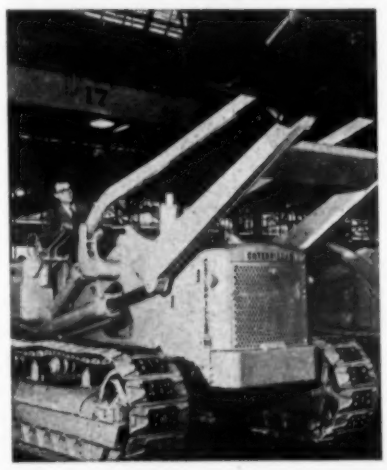
▲ For more details circle NED-421 E3 on enclosed inquiry slip ▲

CHOKER SLING FITTING
locking shoe prevents slackening

Lifting or dragging of rigid or nonrigid loads with wire rope slings is facilitated by this forged steel choker sling fitting. Device features pivoting members which are closed over wire rope, completely encircling it. So long as there is any tension, members cannot become disengaged. Jarring or bumping load cannot shake connection loose, no matter from what angle the strain is applied. Sharp bends in rope at point of attachments are minimized, reducing rope failure. Optional with fitting is locking shoe which overcomes any slackening of the choke. Device is available for ½, ⅝ and ¾-in. wire rope. Made by **Electroline Co.**, 4079 S. LaSalle St., Chicago 9, Ill.

▲ For more details circle NED-422 E3 on enclosed inquiry slip ▲

MOBILE TRACK-TYPE SHOVEL
2-cu yd capacity unit dumps 10 ft 9 in. high and reaches 3 ft 5 in.



A solid bar instead of an equalizer spring is used in No. 6 mobile track-type shovel of 2 cu yd capacity for high cross stability and to prevent track oscillation. Crawler of 66-drawbar-hp is integral with shovel frame. Rear mounted hydraulic system, along with high seat position afford good visibility. Lift cylinders are horizontally mounted above tracks to avoid dirt clogging, and side door panels prevent dirt getting into engine.

Dumping height is 10 ft 9 in. and reach is 3 ft 5 in. Bucket is made of layer plate to withstand abrasive action. Good clearance action is assured by bell crank striking stop on lift arm to shake out sticky materials. Operator is unencumbered by flexing hydraulic hoses since surge tank and hydraulic control valves are contained in one unit in the rear. Control levers for both bucket and lift arms are located so both may be operated with one hand.

Five gears forward and four reverse adapt machine to wide range of job conditions. The 18-in. flat center shoes combine characteristics of flotation, traction and resistance to side slip. Made by **Caterpillar Tractor Co.**, Equipment St., Peoria 8, Ill.

▲ For more details circle NED-423 E3 on enclosed inquiry slip ▲

Plastic Seal

BETTER PACKAGING at LOWER COST!

Protects parts FROM RUST AND DAMAGE while handling or shipping!

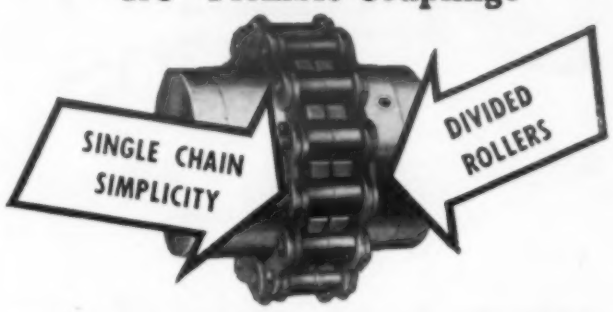
Plastic Seal forms a skin tight coating that is moisture-proof and air-tight. Strongly resists shock and abrasion. Ideal for bulk shipments — requires less wrapping — reduces cost. Although Plastic Seal is tough it can be easily peeled. Transparency allows instant inspection and identification. Also available in colors for coding.

Write today for price information and free engineering service on production dipping problems.

GLOBE Imperial Corporation
2023 Kishwaukee St., Rockford, Illinois

▲ For more details circle NED-424 E3 on enclosed inquiry slip ▲

Here's why it pays to use LINK-BELT "RC" Flexible Couplings



Equalized load / Proper balance at high speeds / Effective compensation for end float and misalignment

Yes, two big engineering features—single chain simplicity and divided rollers—combine to assure top performance, economical power transmission. And that's why you get the three big operating advantages listed above with Link-Belt RC Flexible Couplings. Find out how you can use these efficient couplings to provide positive flexible shaft connection . . . from fractional to 1000 hp. Ask your nearest Link-Belt office or distributor, or write for Folder 2363.

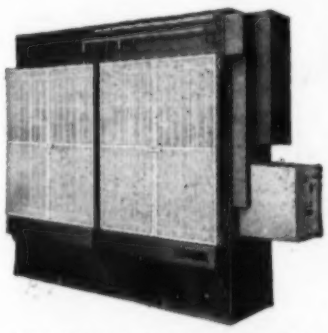
LINK-BELT
"RC" FLEXIBLE COUPLINGS 13,132

LINK-BELT COMPANY: Plants: Chicago, Indianapolis, Philadelphia, Colmar, Pa., Atlanta, Houston, Minneapolis, San Francisco, Los Angeles, Seattle, Toronto, Springs (South Africa), Sydney (Australia). Sales Offices, Factory Branch Stores and Distributors in Principal Cities.

▲ For more details circle NED-425 E3 on enclosed inquiry slip ▲

50 MILLION CFM of Super-Clean Air . . . by Electro-MATIC

ELECTRO-MATIC* electronic precipitators now installed in the U.S. furnish this huge volume of *super-clean* air for industry, business, public buildings and institutions. Widely recognized for superior performance and economical maintenance, AAF's ELECTRO-MATIC provides highest efficiency collection (from smoke to largest air-borne material) . . . combined with fully automatic operation and self-cleaning features. Unit construction in many sizes readily adapts this filter to most air volume requirements. Request full information from your nearby AAF representative or write for Engineering Bulletin No. 250-E.



Today's Best Buy is Better Air!

*ELECTRO-MATIC Automatic electronic precipitator.

American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Ky.
American Air Filter of Canada, Ltd., Montreal, P. Q.

▲ For more details circle NED-426 E3 on enclosed inquiry slip ▲

Work with latices? sizes? hydraulic fluids?

TEST • STUDY • CONTROL VISCOSITY As Simply, Quickly and Easily as Taking Temperature Readings

WITH A Brookfield SYNCHRO-LECTRIC VISCOMETER

Adaptable to any problem from less than one to 32,000,000 centipoises. Send for illustrated catalog.

Just a flick of a switch, then read the Brookfield dial, and you have your viscosity determination in centipoises. The whole operation, including cleaning up, *takes only a minute or two.*

Available in a variety of models suitable for extremely accurate work with both Newtonian and non-Newtonian materials, Brookfield Viscometers are portable and plug in any A.C. outlet. *Write today.*

An important manufacturer reports: "The speedy and simple operation of our Brookfield is responsible for savings up to 30 minutes per determination . . . has resulted in much wider use of viscosity control."

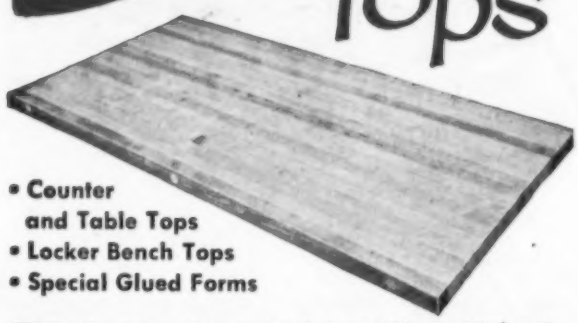
Write Dept. O., Stoughton, Mass.

BROOKFIELD ENGINEERING LABORATORIES, INC.

▲ For more details circle NED-427 E3 on enclosed inquiry slip ▲

HARDWOOD LAMINATED

Bench Tops



- Counter and Table Tops
- Locker Bench Tops
- Special Glued Forms

FROM the drying of the lumber in Sensenich's own kilns* to the cutting, forming and gluing of every hardwood laminated top, the highly trained Sensenich craftsmen play an important part. These skilled workmen use the finest equipment to produce high quality wood parts with thorough efficiency and economy. Remember too, Sensenich is the world's largest producer of wood propellers for personal planes. Sensenich has more than 20 years experience in conditioning, cutting and gluing wood forms to the most exacting standards.

We will be glad to quote on your requirements . . . your request will receive prompt attention.

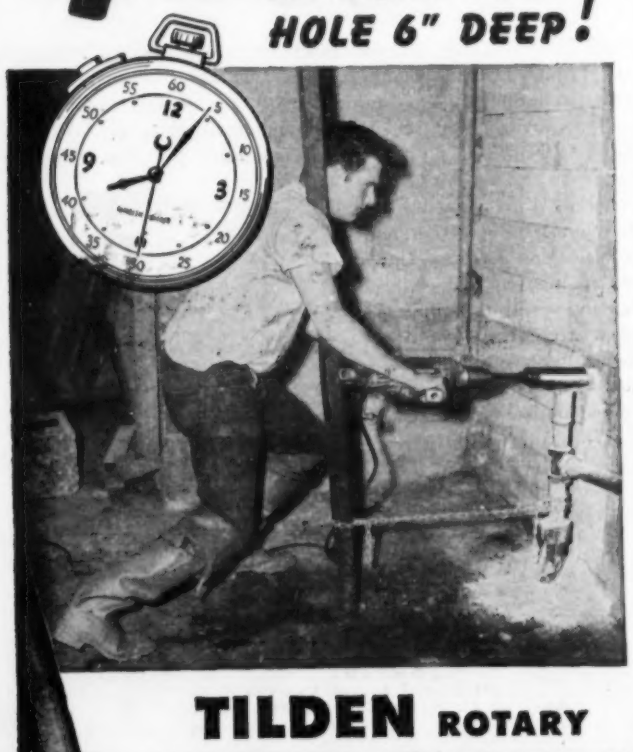
SENSENICH AIRCRAFT PROPELLERS

*Certified by the United States Air Force

SENSENICH CORPORATION
Dept. ND, Lancaster, Pennsylvania

For more details circle NED-428 E3 on enclosed inquiry slip

4½ MINUTES TO DRILL THIS HOLE 6" DEEP!



TILDEN ROTARY KONKRETE KORE DRILLS
cut reinforcing rods in concrete!

Under the actual on-the-job conditions shown above, a Tilden 2½" diameter Rotary Konkrete Kore Drill cut through 6" of concrete—including crossed steel reinforcing rods—*in just 4½" minutes!* The straight, clean, ready-to-use holes permitted immediate running of 2" pipe. You consistently get 5 to 7 times more holes without resharpening with a Tilden Drill—and free factory sharpening is still available on sizes from 3/16" to 4" diameters. Tilden Drills can be used with ordinary electric or rotary air motors. Interchangeable shanks are available for any depth hole.

Find out about this revolutionary drill TODAY! Consult our Engineering Department without obligation, on your drilling problems.

Sold Through Distributors Everywhere

U. S. Patent No. Re. 23539

WRITE TODAY for free illustrated catalog. Please describe your drilling problem in detail.

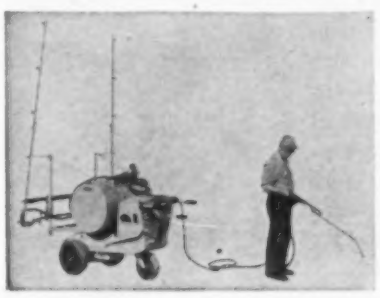
TILDEN TOOL MANUFACTURING COMPANY
209 Los Molinos, San Clemente, Calif.

Gentlemen: Please send me without obligation, complete information on the Rotary Konkrete Kore Drill.

Name_____
Title_____
Company_____
Address_____

For more details circle NED-429 E3 on enclosed inquiry slip

SPRAYER ATTACHMENT
for use with bulk handling unit



Latest accessory to be used with the 1500-lb capacity bulk handling unit is this spraying attachment. Sprayer latches to the chassis for quick interchanging with the 10-cu ft dump bucket, flat bed or snow blade and is powered from the take-off shaft of the Prime-Mover. Attachment has 55-gal capacity and is equipped with 18-ft boom spray and hand hose for other common spray applications. Made by **Prime-Mover Co.,** Third & Oak Sts., Muscatine, Iowa.

For more details circle NED-430 E3 on enclosed inquiry slip

AIR SPINDLE IMPROVEMENT
exhaust muffler cuts noise

Sixty per cent of noise caused in air discharge is eliminated by muffler attachment for Vulcan-aire high speed grinding spindles. Energy is dissipated through hundreds of small openings, so that the exhaust mixes gently with the outside atmosphere. Made by **Vulcan Tool Co.,** Dept. B, 730 Lorain Ave., Dayton 10, O.

For more details circle NED-431 E3 on enclosed inquiry slip

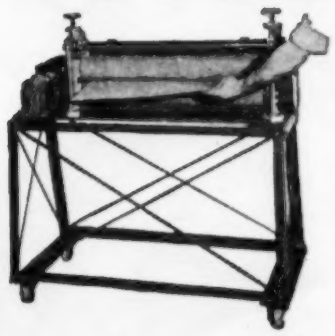
PARTS BELT CONVEYOR
belt is unaffected by hot forgings

Three variable planes make this belt conveyor adaptable to difficult production handling jobs. It receives parts only 8 in. above floor and unloads them into large tote boxes. Drive pulley which engages the carbon steel belt is a spiked cylinder so constructed that neither heat expansion of belt or excessive lubricants can cause it to slip. Belt is unaffected by hot forgings. Built for continuous operation, conveyor is of welded construction and is portable enough to serve in different locations. Made by **R. T. Sheehan Co.,** 8070 N. Territorial Rd., Plymouth, Mich.

For more details circle NED-432 E3 on enclosed inquiry slip

60 years of dependable service

POTDEVIN COMBINING MACHINE



A new, high-speed machine that combines glued materials up to ½ inch thick and 30 inches wide

Designed for use either for hand feeding or set up in a production line. A safety switch is provided for separating the rubber covered rollers. Machine is mounted on a rigidly constructed steel frame, easily ported about on ball-bearing casters.

Other machines available from 24 to 48 inches wide or wider on special order. Machines for combining materials up to 1¼" are also available.

Write for literature on complete POTDEVIN line.

POTDEVIN MACHINE CO.
273 North St., Teterboro, N. J.

ESTABLISHED IN 1893 POTDEVIN

Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

For more details circle NED-433 E3 on enclosed inquiry slip

ELECTRIC and PHOTO-ELECTRIC COUNTERS for every job

Count Anything—Anywhere

Parts, sheets, bottles, cans, boxes, oranges, people, shadows, box-cars — measure lengths of wire, rope, tape, paper, fabric.

Counting Problems Solved

Helping you stop guesswork, save labor, eliminate waste and avoid human error through automatic counting is our business.

Ask your PIC Representative or tell us what you want to accomplish.

Complete Catalog mailed on request

PRODUCTION INSTRUMENT COMPANY
700-12 W. Jackson Blvd., Chicago 6, Ill.

For more details circle NED-434 E3 on enclosed inquiry slip

Viscous Adhesive PUMPED 7 YEARS Without Repairs to

VIKING PUMPS

Installed in 1945, in the industrial adhesive manufacturing plant of F. G. Findley Company, Milwaukee, these two Viking Pumps have given maximum service with minimum attention and without repair costs. They have handled thousands of barrels of adhesives with viscosities from 100 cps to 3000 cps, with temperatures from 70 to 165 degrees F.

If you have the problem of moving heavy, viscous liquids—or any other liquids—Viking experience is available to help you. Write for bulletin 535G.

VIKING AN HONORED NAME IN PUMPING

Viking PUMP COMPANY
Cedar Falls, Iowa

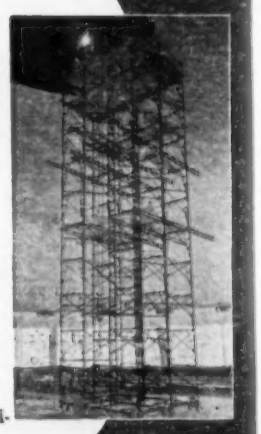
See Our Catalog in SWEETS

For more details circle NED-435 E3 on enclosed inquiry slip

COST CUTTING BECOMES SIMPLE ARITHMETIC

WITH ADVANCE SCAFFOLDING

The ability to make money is built into ADVANCE tubular steel scaffolding. Each feature — self-contained, simple to operate Cam Locks . . . trigger action panel attaching Stack Locks — is employed so as to assure user-profit. Unequaled acceptance and repeat rentals by building management and maintenance men prove that ADVANCE scaffolding is best for any construction and maintenance problem.



Are you getting in on the simple arithmetic that spells savings in dollars for scaffolding users? ADVANCE can help you get started!

Write direct for free literature, engineering and specification data.

BEAVER ADVANCE

ADVANCE SCAFFOLD DIVISION
Beaver Art Metal Corp., Ellwood City 5, Pa.

For more details circle NED-436 E3 on enclosed inquiry slip

For more details circle NED-437 E3 on enclosed inquiry slip

A producer of metal cabinets for automatic vending machines uses Southco Drive Rivets to fasten hinges to the door and body of the cabinets. Fastening time is only 2½ minutes per cabinet. Formerly, the company used bolts, lock washers and nuts to fasten the hinge, an operation which required 25 minutes per cabinet.

The automatic "pull-up" feature of Southco Drive Rivets holds hinges tightly and pressure is uniform along the entire length. Shop men like Southco rivets better since they make their fastening job so much easier. Production has been increased and the company is saving $2100 or more a year in installation time alone.

You, like hundreds of other manufacturers, can obtain real benefits by using Southco rivets on your fastening job. You'll find your fastening costs will be lower, your fastening job better, neater, tighter. No bucking is needed, no special tools, there is no waste and no finishing operations are required.

Send for complete data to Southco Div., South Chester Corporation, 1413 Finance Bldg., Phila. 2, Pa.

SOUTHCO® FASTENERS

PAWL, SCREW AND SPRING • DRIVE RIVETS
ANCHOR NUTS • ENGINEERED SPECIALTIES
OFFICES IN PRINCIPAL CITIES

WHEREVER TWO OR MORE PARTS ARE FASTENED TOGETHER, STANDARD AND SPECIAL DESIGNS FOR IMPROVED PERFORMANCE AND LOWER PRODUCTION COSTS

For more details circle NED-438 E3 on enclosed inquiry slip

PORTABLE SPRAY GUN
requires only electricity to use

Underwriters' Laboratories approved lightweight electric spray gun is an all metal heavy duty unit for wide variety of industrial uses. It delivers over 90 psi pressure at 7200 strokes per minute merely by plugging into an alternating current outlet and pressing its trigger. It has a vibrator unit in the handle and is equipped with an 8-ft neoprene cord, 25-oz polished aluminum container and five extra nozzle disks. Available from **Waldorf Sales Co.**, 363 Central Park Ave., Yonkers, N. Y.

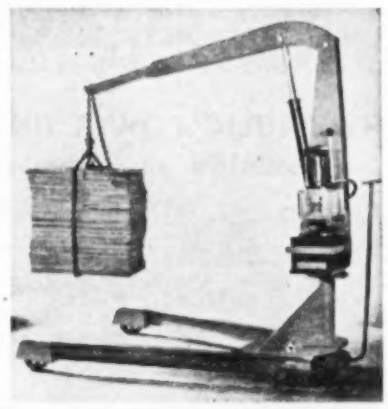
For more details circle NED-439 E3 on enclosed inquiry slip

INSULATED PAIL CONTAINERS
keeps temperature of contents

Completely insulated with Fiberglas, these Scotch pail-type containers with 3-qt capacity will keep contents cold or hot for hours. Buckets are 8½ in. high and have top and bottom diameters of 8¾ and 6½ in., respectively. Model 52 without handle lists at $2.19, while model 52B with handle is $2.49. Containers are packed 12 to a carton. Made by **Melcor Industries,** Dept. N, Waterville, O.

For more details circle NED-440 E3 on enclosed inquiry slip

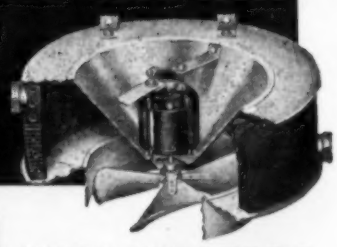
CRANE POWER UNIT
is battery operated motorized unit



Use of electric power pack composed of standard 6-v automotive type battery, electric motor, hydraulic power pump, reservoir and controls makes it possible to lift and handle loads weighing up to 2000 lb without physical exertion with the Star Hydro-lift portable shop crane. Operation of hydraulic crane is controlled by position of handle. Three-wheel straddle type base permits moving truck anywhere in plant, and it can be positioned directly over load even where there is no floor clearance. Made by **Star Machine & Tool Co.,** 215 S. E. Sixth St., Minneapolis, Minn.

For more details circle NED-441 E3 on enclosed inquiry slip

Heat Where You Need It... QUIETLY with



DUNHAM UNIT HEATERS

You're looking into Dunham's new Vertical Discharge Unit Heater—designed to throw heat *exactly* where needed, while maintaining perfect balance between air volume and final air temperatures.

Note the sturdy motor support cone that directs air from heating element to fan and protects motor from excessive heat and dust; the resilient motor mountings that minimize noise and vibration.

Dunham's improved header design assures uniform steam distribution, eliminates air pockets. For complete information, WRITE FOR BULLETIN 1301-14.

DUNHAM

C. A. Dunham Co.
400 W. Madison St., Chicago 6, Ill.
In Canada:
C. A. Dunham Co. Ltd., Toronto
In England:
C. A. Dunham Co. Ltd., London

Quality first for fifty years

For more details circle NED-442 E3 on enclosed inquiry slip

One Unit COMBINES TOOL SUSPENSION AND AIR SUPPLY

WAYNE "PRODUCTION-BOOSTER" HOSE REEL

Get more production per worker . . . save cost of duplicating equipment and maintenance with Wayne Industrial Hose Reels. One unit combines tool suspension and air supply which simplifies installation . . . keeps tools always within reach . . . saves time on high speed production assemblies.

Spring tension of the reel counterbalances weight of air tool. Allows finger tip control of pneumatic drills, screw drivers, nut runners, grinders, blow guns, spray guns and other air activated tools. Powerful spring motor, with permanent lubrication, provides automatic uptake of tool . . . leaves both hands free to remove work from machine.

Cut worker fatigue . . . increase production . . . reduce tool maintenance costs . . . prolong tool life by installing Wayne Industrial Hose Reels on your production and assembly lines. There's a Wayne Reel to meet every requirement whether for air, oil or water.

THE WAYNE PUMP COMPANY
SALISBURY, MARYLAND • TORONTO, CANADA

Wayne NATION WIDE SERVICE

INDUSTRIAL HOSE REELS
FOR AIR, WATER, FLUID LUBRICANTS AND COOLANTS

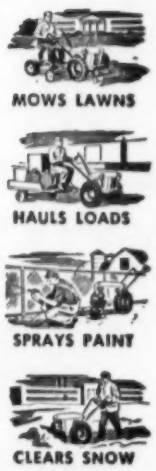
For more details circle NED-443 E3 on enclosed inquiry slip

NEW UTILITY TRACTOR featuring AUTOMATIC TRANSMISSION

Bready POWER-FLO

GREATEST ACHIEVEMENT IN UTILITY-TRACTOR HISTORY

Only the new BREADY provides the advantages of automatic fluid drive. Automatic type POWER-FLO assures smooth easy operation . . . infinitely variable speeds forward and reverse . . . full use of horsepower . . . minimum maintenance. This new drive automatically increases drawbar pull when more power is needed. It eliminates gear shifting, belts and pulleys, sudden jerky starts, shock and strain. The BREADY POWER-FLO tractor is sturdily built for continuous usage, and a complete line of attachments adapts it to all types of jobs.



Write today for information.
SCHNEIDER SYSTEM

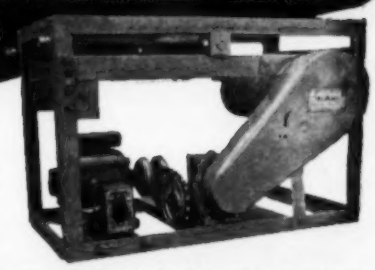
Bready

1211-BT
THE BREADY TRACTOR & IMPLEMENT CO.
5005 AURORA RD. • SOLON, OHIO

For more details circle NED-444 E3 on enclosed inquiry slip

Make YOUR OWN BELT CONVEYOR and drive it with a PAKAGE POWER UNIT

THE BEST POWER UNIT ON THE MARKET



IF YOU PLAN to build your own belt conveyor using wood frames, tables or roller gravity —the annoying problem of calculating speeds, figuring proper size bearings, pulleys, shaft diameters, reducer torque, roller chain size, sprocket ratio—can be eliminated by using an ISLAND PAKAGE POWER UNIT . . . a scientifically engineered

SELF-CONTAINED BELT CONVEYOR DRIVE

PAKAGE POWER UNITS are compact, portable and come completely assembled ready to be easily bolted to the chassis of the conveyor to be driven. OVER 1000 NOW IN REGULAR SERVICE. Get the facts on how these practical, multiple-use units can increase efficiency and lower costs.

FREE!

ISLAND EQUIPMENT CORP. Dept. NE5
27-01 Bridge Plaza North
Long Island City 1, N. Y.
Sounds good to me. Send brochure on PAKAGE POWER UNITS and various applications.
NAME_____
ADDRESS_____
CITY_____ STATE_____

For more details circle NED-445 E3 on enclosed inquiry slip

KENNAMETAL "BUTTON" TOOLS

UNBUTTON Production Tie-Ups

Get acquainted with this new tooling technique that handles jobs ranging from profiling to planing—gets more work done with less carbide, uses simplified tool designs, and greatly reduces grinding expense. Here are typical applications:

PLANING: Machine tool builder reports heavy duty button tools cut time of planing 15-foot gray iron castings from 86 to 41 minutes.

BORING: Car wheel maker records up to 200 wheels bored before set of four heavy duty Kennametal buttons need resharpened.

PRODUCTION JOB: Tractor accessory shop faces to length and chamfers both ends of more than 3600 actuating cylinders with set of three buttons.

Performance reports on these and other "button-tooled" jobs will be sent—or our field engineer will give you complete information—on request. Kennametal Inc., Latrobe, Pa.

KENNAMETAL
CEMENTED CARBIDE TOOLING THAT INCREASES PRODUCTIVITY

▲ For more details circle NED-446 E3 on enclosed inquiry slip ▲

You gain UNIQUE ADVANTAGES with the Hapman

PIVOTED BUCKET CARRIER FOR WET OR DRY MATERIALS

MANY CIRCUIT LAYOUTS POSSIBLE—HANDLES FRAGILE CRYSTALS, LUMP OR POWDERED MATERIALS

One of *your* tough problems in materials handling may be happily solved by the *unique* patented features of this Hapman Carrier design.

Circuits of many types can be built . . . to carry fragile crystals, corrosives, abrasives and other "problem" materials . . . at speeds to 60′ per minute—100 tons per hour. Design permits *gentle* automatic top-loading—automatic unloading and unusually long life.

There's *much more* that may interest you—

WRITE FOR PIVOTED BUCKET BULLETIN HB—ND 553

Hapman CONVEYORS, INC.
DIVISION HAPMAN-DUTTON COMPANY
KALAMAZOO MICHIGAN

▲ For more details circle NED-447 E3 on enclosed inquiry slip ▲

STACKING TYPE SKID accommodates various long items

Pipe, angle iron, structural steel and other long items can be stacked and transported by the model GC-50 Phil-Tier, a skid type materials handling unit. Stacking can be on other Phil-Tiers, or on three other handling units made by this company. Of all welded steel construction, it has a corrugated deck and four stakes permanently welded at each corner. Capacity is 4000 lb and tiering capacity is 16,000 lb. Overall height is 30 in., but width and length can be specified by the buyer. Made by **Phillips Mine & Mill Supply Co.,** 2303 Jane St., Pittsburgh 3, Pa.

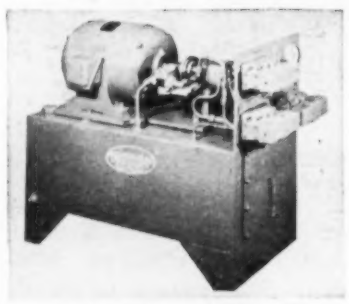
▲ For more details circle NED-448 E3 on enclosed inquiry slip ▲

SMALL CAPACITORS are subminiature metal-clad units

Suitable for operation at temperatures from −55 to 125° C, altitudes up to 50,000 ft and under conditions of thermal and physical shock, two lines of subminiature capacitors meet military requirements. Solid dielectric metal-clad units are small in size and have high insulation resistance. Liquid dielectric types are 20 per cent smaller than comparable oil-filled capacitors. Both lines can be supplied in tab or exposed foil designs in ratings from 0.001 to 1.0 muf in voltages of 100, 200, 400 and 600 v dc. Made by **General Electric Co.,** Schenectady 5, N. Y.

▲ For more details circle NED-449 E3 on enclosed inquiry slip ▲

HYDRAULIC POWER UNIT mounted on 50-gallon tank



Consisting of a 12-gpm hydraulic pump and a 7½-hp motor, this hydraulic power unit includes a relief valve and three panel-mounted, solenoid-operated four-way control valves. The 50-gallon reservoir has filter, breather, oil level gage and baffles. Made by **J. N. Fauver Co.,** 47 W. Hancock Ave., Detroit 1, Mich.

▲ For more details circle NED-450 E3 on enclosed inquiry slip ▲

This catalog brings you all the data on THERMOSWITCH® Thermostats

How recent is the data in your file on temperature controls and detection devices? Do you know just how accurate controls can be? Are you up on the most recent designs?

That is what the Fenwal Catalog 400 is about. If your product or process calls for a sensitive and positive instrument for controlling temperatures . . . if you must have thermostatic switches resistant to shock, vibration and easy to install — you will find your answer here.

Your copy is ready. Send for Catalog 400. Also feel free to ask for Fenwal engineering assistance having to do with any temperature control problem involving heat, vapor level, radiant heat, pressure, and other variables. Write Fenwal Incorporated, 85 Pleasant Street, Ashland, Mass.

A Fenwal THERMOSWITCH control is so precisely engineered, compact and failure-proof that it is used throughout all industry wherever standards are the most meticulous.

Fenwal
THERMOSWITCH®
Electric Temperature Control and Detection Devices
SENSITIVE...*but only to heat*

▲ For more details circle NED-451 E3 on enclosed inquiry slip ▲

Over 85% of the torque wrenches used in industry are

Sturtevant TORQUE WRENCHES

Read by Sight, Sound or Feel

- Permanently Accurate
- Practically Indestructible
- Faster—Easier to use
- Automatic Release
- All Capacities

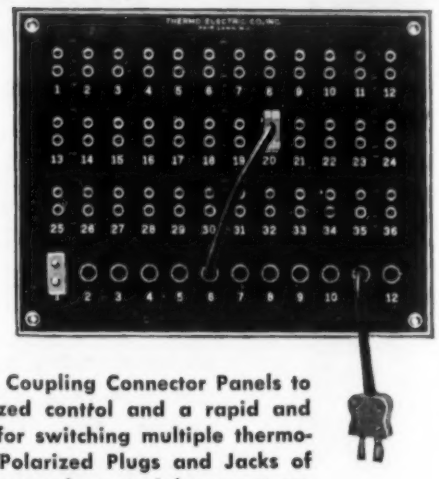
in inch ounces
...inch pounds
...foot pounds
(All sizes from 0-6000 ft. lbs.)

Every manufacturer, design and production man should have this valuable data. Sent upon request.

P.A. Sturtevant Co.
ADDISON QUALITY ILLINOIS

▲ For more details circle NED-452 E3 on enclosed inquiry slip ▲

CONNECTING MANY THERMOCOUPLES?



Panel for 36 Thermocouples and 12 Pyrometer Connections.

PAT. PEND.

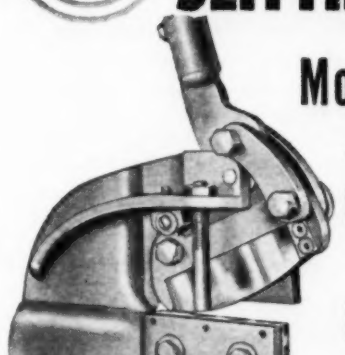
Use these Quick Coupling Connector Panels to provide centralized control and a rapid and flexible system for switching multiple thermocouple circuits. Polarized Plugs and Jacks of calibrated thermocouple material connect numerous thermocouples to pyrometers—regardless of their location.

Write for Catalog Section 23-T

Thermo Electric Co., Inc.
FAIR LAWN NEW JERSEY

▲ For more details circle NED-453 E3 on enclosed inquiry slip ▲

NEW Beverly SLITTING SHEAR



More Power...
Easier Cutting
Exclusive Design
Cleaner Cuts
Ruggedly Built
last a lifetime
Capacities to 3/16″

SS-3 1/8″ slitting cap; 1/8″ trimming; 1/4″ x 2″ bar capacity

Get faster, easier slitting and trimming with a new design Beverly "SS" Series Slitting Shear. Rigid, strongly braced frame; compounded linkage and extra strength where needed. Many exclusive features. Write for FREE illustrated Bulletin.

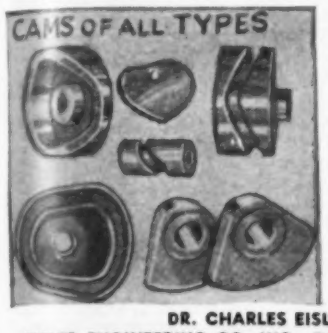
See your Beverly Distributor today.
Ask for a demonstration—no obligation.

Beverly SHEAR MFG. CO.
3016 W. 111th STREET • CHICAGO 43, ILLINOIS

▲ For more details circle NED-454 E3 on enclosed inquiry slip ▲

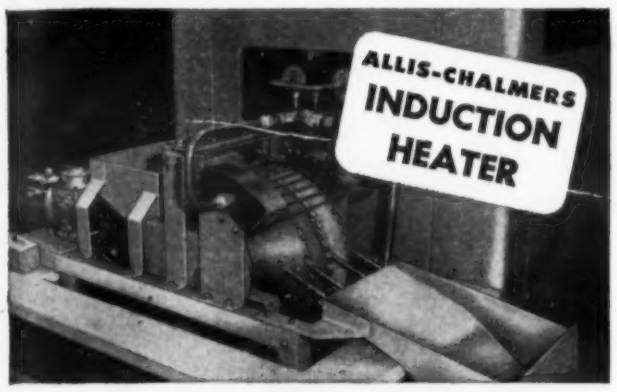
TURNTABLES AND POSITIONERS over 100 different types for welding, brazing, soldering, spraying, glass insulator melting and glass glazing, with rotating stations and indexing with barrel cam or geneva gear action. For work transferring, tilting positions, motorized or hand operated. Rotating tables of all kinds for over 33 years. Many types made by EISLER. We supply any part or complete equipment and we make special turntables to your order. Write for catalog.

CAMS
MADE TO YOUR SPECS.



DR. CHARLES EISLER, M. E., PRES.
EISLER ENGINEERING CO. INC., 740 S. 13TH ST., NEWARK 3, N. J.

▲ For more details circle NED-455 E3 on enclosed inquiry slip ▲



Hardens Both Ends of 3600 Lifter Rods Per Hour

Get high production like this with an Allis-Chalmers induction heater. In this application push rods are picked up from a hopper by a rotating wheel, conveyed through the coil, heated at both ends simultaneously, then oil spray quenched and deposited in a bin.

This same heater can be used for brazing, soldering, annealing, as well as case and through hardening.

High production, plus versatility, plus low operating cost make the Allis-Chalmers induction heater an important time and money saver. Find out what it can do for you. Call your nearby Allis-Chalmers district office or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-3976

ALLIS-CHALMERS

▲ For more details circle NED-456 E3 on enclosed inquiry slip ▲

TAL PORTABLE BENDERS

Complete ALL Piping Jobs FASTER

SAVE ON

- Number of Fittings
- Elbows & Couplings
- Cutting, Threading
- Overall Costs

Install pipe & conduit *faster* at *lower* cost by reducing up to 80% the number of fittings or elbows and couplings otherwise needed. Save on cutting and threading. You can with a Tal, because Tal Portable Benders make any degree bend up to 180° in a SINGLE OPERATION WITHOUT SHIFTING THE PIPE.

No guesswork for offsets, long sweeps or any other bends. No experience necessary to make accurate, wrinkle-free bends right on the job. *No spoilage.* Bend indicator assures identical repeat bends without measuring. Learn today how you can earn more money and handle more jobs with a Tal bender.

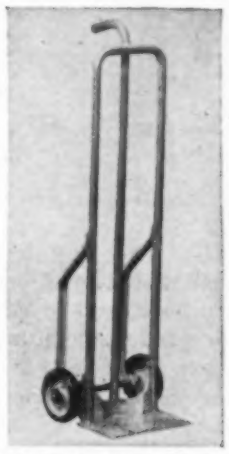
COMPLETE LINE OF BENDERS
For pipe up to 8 inch.
For copper and thinwall tubing.
6 Way Hickeys—lifetime guarantee.

WRITE FOR THIS FREE BULLETIN.

Tal Bender, Inc. Dept. 4 Milwaukee 2, Wis.

▲ For more details circle NED-457 E3 on enclosed inquiry slip ▲

HAND TRUCK
has aluminum tubing frame



Rated capacity of model P single handle, solid blade hand truck is 500 lb. It weighs 18½ lb and has a frame of aluminum alloy tubing that resists twisting in any direction. Truck is made in seven models with extruded heat treated aluminum blade and extra-length stair-climbing runners which aid in moving loads up stairs or over curbs. Solid rubber tires are standard, with semipneumatic or cushion tires optional. Made by **Honeyman Mfg. Co.,** Dept. N, 3925 S.W. Macadam Ave., Portland 1, Oreg.

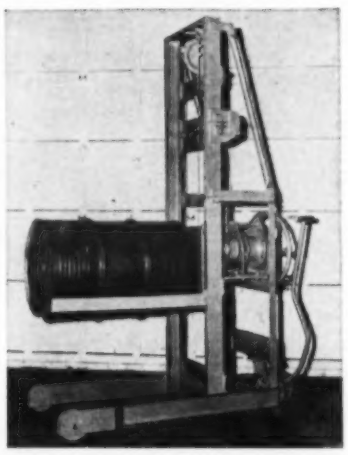
▲ For more details circle NED-458 E3 on enclosed inquiry slip ▲

CASTERS & WHEELS
of fabricated steel are unbreakable

Problem of breakage is minimized by casters and wheels which are fabricated of mild steel arc-welded into resilient unbreakable units. Wide range of capacities with sealed swivels and wheel bearings is available. Choice of steel, rubber, composition, oil-resistant, static-conductive or plastic tires is offered. Straight roller, ball or tapered roller bearings are optional. Made by **All Steel Welded Truck Co.,** 1150 Railroad Ave., Rockford, Ill.

▲ For more details circle NED-459 E3 on enclosed inquiry slip ▲

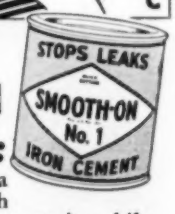
BARREL ELEVATOR & MOVER
for any weight or size barrel



One man can lift and transport safely any weight, size or type barrel with this hand-operated portable elevator. Self-contained unit, available in any capacity, can be made for hand, electro-hydraulic or full electric power. It has all-welded channel steel construction. Mast is hinged to allow passage through doorways or low overhead obstacles. Made by **West Bend Equipment Corp.,** 220 S. Walter St., West Bend, Wis.

▲ For more details circle NED-460 E3 on enclosed inquiry slip ▲

A—Deep crack. B—Tamping Smooth-On in. C—Crack completely sealed.



If You've Never Used SMOOTH-ON, *read this:*

Smooth-On No. 1 Iron Cement is a metallic powder which you mix with water to the consistency of putty. You tamp it, while still soft, into a crack or hole, making sure to force it against all surfaces. With Smooth-On you don't need to use heat or special gadgets. As it hardens, it expands slightly, clinging tightly in place. The repaired part is ready for use as soon as Smooth-On sets hard. Keep Smooth-On handy for both emergency and routine maintenance repairs. Buy it in 7 oz., 1 lb., 5 lb., 20 lb., or 100 lb. size. If your supply house hasn't Smooth-On No. 1, write us.

FREE 40-PAGE REPAIR HANDBOOK

Shows many industrial and home repairs made with No. 1 and other Smooth-On Cements. Leaks stopped, cracks sealed, loose parts made tight. 140 illustrations. Drop us a line for YOUR free copy.

SMOOTH-ON MFG. CO., Dept. 10
570 Communipaw Ave., Jersey City 4, N. J.

Do it with **SMOOTH-ON**
THE IRON REPAIR CEMENT OF MANY USES

▲ For more details circle NED-461 E3 on enclosed inquiry slip ▲

CAL-WIC WIRE CLOTH
In all Meshes, Weaves and Weights

Filtering, screening or grading—whatever your special job demands may be—Cal-Wic Wire Cloth is available in the right mesh, weave or weight to meet your requirements. Resistance to corrosion, abrasion and temperature extremes assured through the use of appropriate metals and alloys.

The long-wearing qualities of Cal-Wic Wire Cloth take on added importance during times like the present.

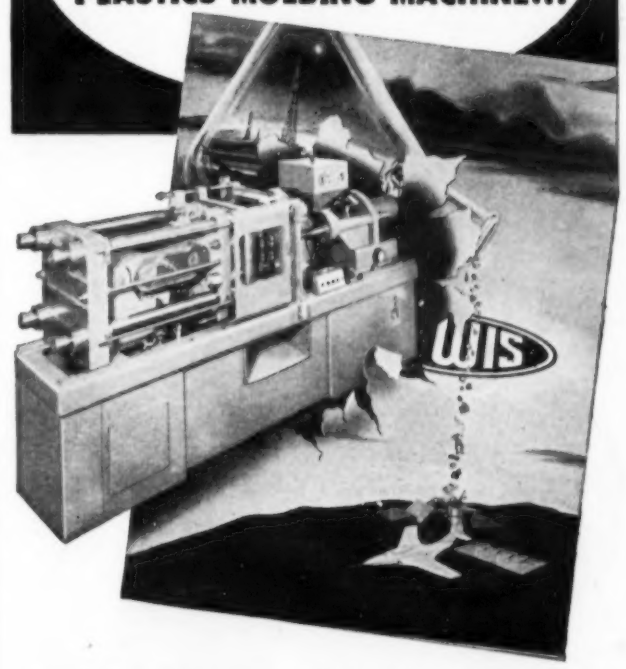
For additional information write or phone our nearest sales office.

EAST: Wickwire Spencer Steel Division, Clinton, Mass.
WEST: The Colorado Fuel & Iron Corporation, Denver, Colorado.
PACIFIC COAST: The California Wire Cloth Corporation, Oakland, Calif.

CAL-WIC INDUSTRIAL SCREENS
THE COLORADO FUEL AND IRON CORPORATION

▲ For more details circle NED-462 E3 on enclosed inquiry slip ▲

GET THE FACTS ON THE *NEW LEWIS "6"* PLASTICS MOLDING MACHINE...



FEATURING 200-TON HYDRA-LOCK CLAMP!

Outstanding new LEWIS "6" plastics injection molding machine provides the speed, economy, silent operation and compact construction of a lightweight model . . . yet handles a wide range of parts having large projected areas. Exclusive feature of this machine is the new HYDRA-LOCK high-speed 200-ton clamping mechanism . . . the safest, most powerful mold clamping device available today! Other features include injection pressures up to 15,100 psi, large platens, compensating feed, fast opening die-lock mechanism, automatic molding cycle and minimum maintenance.

Write today for this new 8-page illustrated catalog.

Lewis Welding & Engineering Corp.
14 Interstate Street, Bedford, Ohio

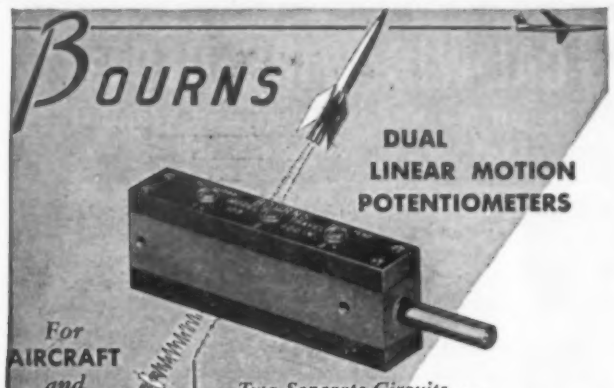
Gentlemen:
Please send me Bulletin No. 102 describing the new LEWIS "6" plastics injection molding machine.

Name _____ Title _____
Company _____
Street _____
City _____ Zone ____ State ____

1227-LW

LEWIS
THE LEWIS WELDING & ENGINEERING CORPORATION

▲ For more details circle NED-463 E3 on enclosed inquiry slip ▲



Two Separate Circuits . . . Designed for precise instrumentation in automatic control circuits for aircraft, guided missiles and general industry, BOURNS linear motion potentiometers accurately translate mechanical position or movement into two independent signals . . . one signal often used for feed-back control and the other for telemetering.

This dual instrument possesses all the advantages of two single potentiometers and in addition, saves space, weight and installation time. With this wire-wound potentiometer a resolution of .001 inch is obtainable in standard ranges from 1 to 6 inches.

BOURNS designs and manufactures other potentiometer instruments which measure gage pressure, differential pressure, altitude and acceleration.

BOURNS LABORATORIES
6135 Magnolia Avenue, Riverside, California
Technical Bulletin on request, Dept. 129

▲ For more details circle NED-464 E3 on enclosed inquiry slip ▲

* Materials Handling Exposition
Philadelphia, May 18-22, incl.

Series 13, long top plate

Series 12, wide top plate

ALBION'S VERSATILE NEW SERIES 12 AND 13 CASTERS

Albion's two completely new industrial series, 12 and 13, have wider, extra-long formed steel top plates to afford greater flexibility with a broader variety of bolt hole spacings that will solve practically any attachment problem. Conservatively rated as medium duty industrials, they are built in a wide range of both rigid and swivel models in wheel diameters from 3¼" to 8". Steel wheels or Texite, Moldon, Rolite and No-flex are available for greater floor protection and super-smooth operation.

Be sure to see the new Series 12 and 13 Casters in Albion's booth, No's 315-317 and, if you can't make it, why not ask for your copy of the new illustrated specification sheet on these versatile new casters.

Don't delay . . . see 'em today—or contact your nearest Albion representative! Write, wire or phone:—

ALBION INDUSTRIES, INC.
ALBION, MICHIGAN

▲ For more details circle NED-465 E3 on enclosed inquiry slip ▲

WEATHERPROOF LIGHTING UNIT
heatproof gasket seals lamp

Either spot or flood lamp can be used with this flexible indoor-outdoor lighting fixture which features heatproof gasket for weatherproof seal between lamp and holder. Carrying UL seal of acceptance, unit is offered with choice of self-supporting universal mounting bracket that fits standard floor, wall or ceiling outlet, or with special spike for ground mounting. It takes medium base sealed beam lamps and comes with 6-ft heavy duty cord and plug. Holder is heavy gage aluminum with porcelain socket, and base is plated steel. Made by **Shalda Mfg. Co.**, Lightscapers Div., 835 S. San Fernando Rd., Burbank 60, Calif.

▲ For more details circle NED-466 E3 on enclosed inquiry slip ▲

DRUM LIFTER
for open or closed containers

Both open and closed drums can be handled by this vertical drum lifter. It has a safety barrel grip and is of all steel construction with heavily welded chain. It can be used under either high or low ceiling conditions. Made by **Palmer-Shile Co.**, 16015 Fullerton St., Detroit 27, Mich.

▲ For more details circle NED-467 E3 on enclosed inquiry slip ▲

RADIO-CONTROLLED TRUCKS
remotely controlled by operator

When the operator of this Barrett Tractor Ox electric industrial truck wants to move it forward, backward or around a corner, he does it by radio—without going to the tractor. The remote control unit is worn on his belt. Such an installation makes for more efficient order picking by enabling the picker to move stock to truck over the shortest distance, then move truck and trailer train without going to the tractor. Distance of operator from the drive unit is limited only by his range of vision. He can also ride and operate the truck in the conventional manner. Made by **Barrett-Cravens Co.**, 4609 S. Western Blvd., Chicago 9, Ill.

▲ For more details circle NED-468 E3 on enclosed inquiry slip ▲

Engineered for use on transformer vaults, weatherproof rooms, marine bulkheads, test rooms and similar applications, this new insulated door-and-frame unit is available in a range of sizes to meet every individual requirement. It can be furnished with round or square corners on door or frame.

Positive seal is assured by special neoprene rubber gasketing which is readily adjusted or replaced. Standard Overbeke-Kain closures are all-welded steel construction. Stainless steel, aluminum or other non-corrosive materials are also available. Hardware is supplied to user's specifications.

Write for Bulletin No. 784 for complete information.

the Overbeke-Kain company
20979 AURORA RD....BEDFORD, OHIO

▲ For more details circle NED-469 E3 on enclosed inquiry slip ▲

SPEED LOAD HANDLING
for Truck, Shop or Machine

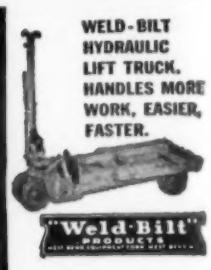
UNIT *utility* HOIST

Hydraulically operated Unit Utility Hoists can speed and ease handling of 1000 to 2000 lb. loads around your trucks, shop or machines, and the hoist itself can be switched from the truck, floor or machine mount in seconds. Three lifting points and boom extension give a wide working range. Hoist swings 360° on truck and locks securely in traveling position. Many uses in every plant.

Write today for latest information

UNIT MFG CO.
1223 Harmon Place
Minneapolis 3, Minnesota

▲ For more details circle NED-470 E3 on enclosed inquiry slip ▲



One Midwest manufacturer saved $90,000 on equipment cost alone because he called in a Weld-Bilt engineer FIRST, before deciding on expensive special-design units recommended to solve a difficult handling problem. Our engineer, experienced in cost-saving shortcuts, showed how simple adaptation of more standard equipment could do the job even better.

This is the kind of service you can expect from WELD-BILT . . . a thorough analysis of your problems based on years of varied experience and wide knowledge, of handling problems . . . then a recommended solution that will do YOU the most good — in time and labor savings, in product protection, production speed-up — at the lowest cost. It may involve adapting standard equipment, custom-engineering new equipment — or merely realigning your present operations.

Call in the WELD-BILT Materials Handling Engineer for an economical solution to your problem today. You'll probably save money.

WEST BEND EQUIPMENT CORP.
311 Water St., West Bend, Wis.

MATERIALS HANDLING ENGINEERS

Portable Elevators • Pallet Trucks • Single Stroke Lift Trucks • Two-Wheel Trucks • Platform Trucks • Skid Platforms.

▲ For more details circle NED-471 E3 on enclosed inquiry slip ▲

YOU CAN DO
A BETTER JOB WITH
TUFFLEX*
FACTS

There's a storehouse of profitable information in this Tufflex Sample & Specification Kit. Here's the amazing story about a new "man-made" cellulose felt...to help you solve problems of packaging, thermal insulation, vibration, shock absorption, cushioning and padding. Get the Tufflex facts. Investigate Tufflex for increasing production and reducing costs...increasing quality and sales. Write on your letterhead to Wood Conversion Co., Dept. 127-53 First National Bank Bldg., St. Paul 1, Minn.

Keep Your Eyes On... **TUFFLEX***

*REG. U. S. PAT. OFF.

▲ For more details circle NED-472 E3 on enclosed inquiry slip ▲

for Your Shipping Dept.

NEW DESIGN...
FITS THE HAND...
LESSENS FATIGUE

The "HANDY A" is the only fountain stencil brush with the "natural grip."

- Lightweight, one-piece, leakproof construction.
- Push-Button Ink Control.
- Easy to Fill.
- Replaceable Tips.

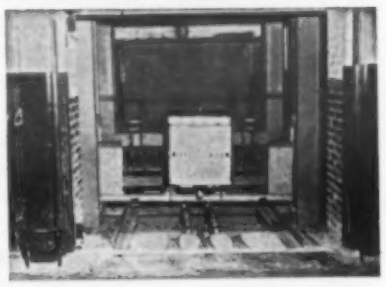
FREE! "IDEAL SHIPPING GUIDE. Handy Shipping room hints.

Manufacturers of Ideal Stencil Machines, Markers, Ink, Stencil Board, etc.

IDEAL STENCIL MACHINE CO.
134 IOWA AVE., BELLEVILLE, ILL.

For more details circle NED-473 E3 on enclosed inquiry slip

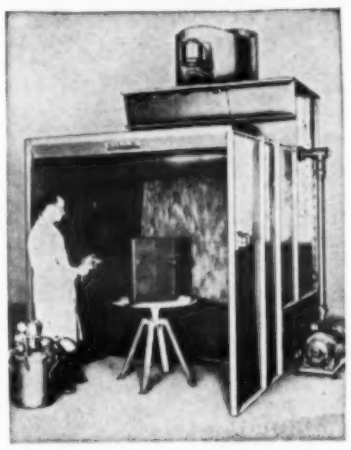
VERTICAL-CHAIN CONVEYOR is endless chain, ferris wheel type



Tailored to meet specific plant conditions and product requirements, vertical-chain conveyors are ferris wheel type designed to carry box trucks or manufactured items between floors. Trucks are pushed out into shaftway on retractable 'fingers' or shelves. Trays, suspended between endless chains, pick up trucks, carry them up and over drive sprockets and down other side where they are deposited on discharge-floor fingers. Automatic safety devices and interlocks prevent conveyor operation unless loading and dicharge stations are ready and clear. Illustrated is six-story installation which handles large cylindrically-shaped "beams" of rayon as well as box trucks. Made by **Gifford-Wood Co.**, 23 Hill St., Hudson, N. Y.

For more details circle NED-475 E3 on enclosed inquiry slip

SPRAY PAINTING BOOTH utilizes both water washing and centrifugal force to scrub air



A combination of both water washing and centrifugal force are utilized by the Dynaprecipitor spray painting booth to free pigment from exhausted air. Overspray and fumes drawn through booth by exhaust fan travel a winding route designed to trap air borne paint particles before they reach fan or out-of-doors. Thorough water washing takes place at four locations. Paint particles are flushed into collection pan for reclamation or removal.

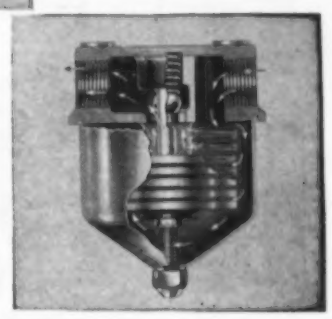
Features of booth are self-scouring baffle plates located at base of rear water curtain which trap pigment that may have escaped prior washing and which remove free moisture in the exhaust air. Plates are staggered, causing exhaust air to twist and turn and subject paint particles to dual scrubbing and impingement action. All surfaces of booth are easily reached and easy to clean since every surface pigment contacts is constantly flushed. Front water curtain and baffle plates can be lifted out by hand to facilitate inspection and maintenance. Recessed trough in collection pan speeds draining and simplifies cleaning. Made by **Binks Mfg. Co.**, Dept. NED, 3122 Carroll Ave., Chicago 12, Ill.

For more details circle NED-476 E3 on enclosed inquiry slip

Two AIR-MAZING ways to keep dirt out of your hydraulic systems

1 AIR-MAZE BREATHER FILTERS for hydraulic system vents keep out airborne dust and dirt. Oil-wetted wire baffles trap the dust, also act as efficient backfire flame and spark arrester. All metal, cleanable, vibration-proof filter media. Wide range of types and sizes.

2 AIR-MAZE LIQUID FILTERS are permanent, all-metal, cleanable. Many times more effective filtering area than in conventional cylindrical filter cartridges. Special screen media available in various mesh sizes. Capacities: 1.7 gpm to 720 gpm.



FREE BOOKLETS! Write today for copies of new booklets on Air-Maze liquid filters and Air-Maze breather filters.

AIR-MAZE CORPORATION
25001 Miles Rd. • Cleveland 28, Ohio

For more details circle NED-478 E3 on enclosed inquiry slip

How much do you weigh?

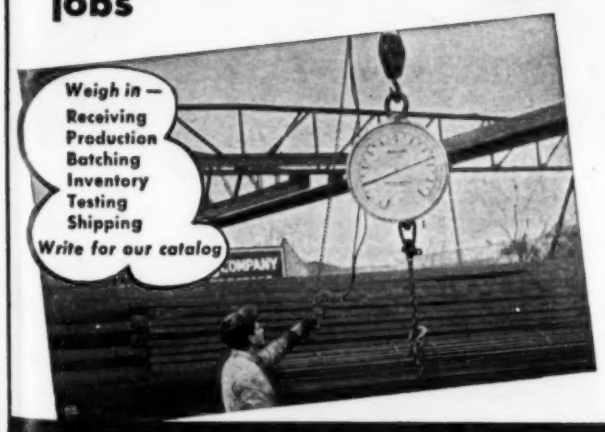
On Display Booth 637, Materials Handling Show, Philadelphia, May 18.

Not you, but your products! Do you weigh in receiving, at production stages, etc. to protect your operation against overcharges, losses, miscalculations? HYDROSCALE, the hydraulic crane scale, makes it practical to check whenever and wherever you should, weighs on the spot, eliminates weighing stations and man power and equipment tie-ups.

36 MODELS, 500 to 200,000 LBS.

HYDROSCALE

reduces the effort and expense associated with routine weighing jobs



HYDROWAY SCALES, INC.
20614 W. 8 Mile Rd., P.O. Box 4754, Detroit 19, Mich.

For more details circle NED-474 E3 on enclosed inquiry slip

HOW WOULD YOU USE KOILED KORDS*

Koiled Kords are retractile electric cords that extend to approximately five times their coiled length and retract to their original shape and size.

Koiled Kords are made under a patented process that eliminates sagging or bagginess — the coil is always tight when retracted, yet it extends easily to its full length. Koiled Kords have innumerable uses in communications, home and industry — HOW WOULD YOU USE THEM? *trade mark

Write on your business stationery for a sample of Koiled Kords.

Koiled Kords INCORPORATED
BOX K, HAMDEN, CONNECTICUT
IN CANADA: R. D. FLECK & CO., LTD., OSHAWA, ONTARIO

For more details circle NED-477 E3 on enclosed inquiry slip

42 STOCK SIZES

HALLOWELL

SOLID STEEL COLLARS

Your HALLOWELL industrial distributor stocks these precision machined steel collars in sizes to fit shafts from 3/16" to 3" diameter inclusive. The famous self-locking UNBRAKO Socket Set Screw—the screw that won't work loose—assures positive positioning of every HALLOWELL collar. Write for literature. SPS, Jenkintown 24, Pa.

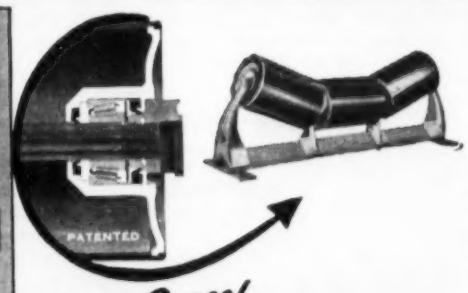
Our Fiftieth Year: A START FOR THE FUTURE

HALLOWELL POWER TRANSMISSION DIVISION

SPS
JENKINTOWN PENNSYLVANIA

For more details circle NED-479 E3 on enclosed inquiry slip

UST



Saves Grease! Saves Labor! Saves Belts!

If You Use Belt Conveyors You Need

CONTINENTAL IDLERS

- UNIT-SEALED
- TIMKEN BEARINGS
- PRE-LUBRICATED

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ALL SIZES! ALL TYPES! CG-5301

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
Birmingham 2, Ala.
ATLANTA • DALLAS • MEMPHIS • NEW YORK

For more details circle NED-480 E3 on enclosed inquiry slip

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Save Money

OVER 9,000 ITEMS INCLUDING

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
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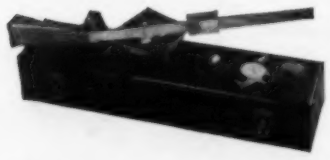
BE RIGHT!

IN ALL YOUR ABRASION RESISTANCE TESTS

On your job you have to be RIGHT, and here's the instrument that will help you do it. Simulates ACTUAL abrasion and wear conditions during test and gives ACCURATE numerical index for your report. Recognized the world over as the STANDARD for testing plastics, rubber, textiles, paint and linoleum. Send coupon below for free booklet!

SHEAR HARDNESS and DIAMOND SCRATCH TESTER

Tests quality of plastic material and plastic coated surfaces to resist scratches, digs, scrapes and other physical damage not classed as normal wear. Handles specimens from thin plate to ⅛" thickness. Used everywhere for precision perfect tests.



The Taber STIFFNESS GAUGE

Determines both INITIAL and NORMAL stiffness of sheet and wire specimens and gives report from DIRECT READING. Precision shear cuts exact specimens from paper or plastic (up to 20 pt.) to eliminate possible variation in results.

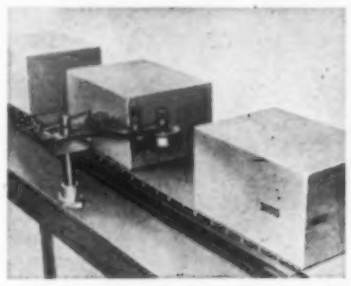
Taber INSTRUMENT CORPORATION
SECTION 16
111 Goundry St., North Tonawanda, N. Y.

☐ Please send me booklet on Taber Abraser
☐ Please send me booklet on Taber Hardness and Scratch Tester
☐ Please send me booklet on Taber Stiffness Gauge

NAME .....
COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....

▲ For more details circle NED-483 E3 on enclosed inquiry slip ▲

SHIPPING CASE MARKER
marks front and side simultaneously



Both the front and one side of shipping cases can be marked with code-dates, lot numbers and other identifying marks by the friction-operated Rolacoder 500 imprinter. Marks are automatically imprinted on both surfaces as cases move along conveyor line. Machine repositions itself after imprinting each case so that marks on successive cases appear in identical location. Marks can consist of one line of copy containing up to eight letters or figures in bold ½-in. type. Copy changes can be made in minutes. Ink reservoir has capacity for 8 hours continuous operation. Made by **Adolph Gottscho, Inc.**, 6C Terminal Rd., Hillside 5, N. J.

▲ For more details circle NED-484 E3 on enclosed inquiry slip ▲

STARTER ROPE
for air-cooled gasoline engines

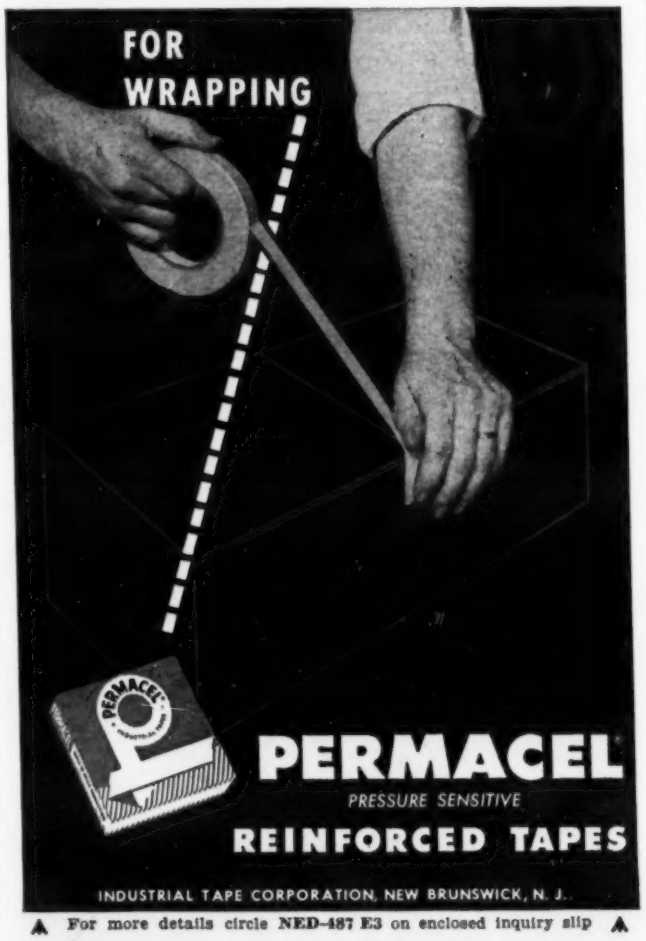
Four-foot length of Nylon rope with a wooden handle is available for starting air-cooled gasoline engines. It is moisture and mildew resistant and will operate efficiently on equipment up to 5 hp. Made by **Plymouth Cordage Co.**, 378 Court St., Plymouth, Mass.

▲ For more details circle NED-485 E3 on enclosed inquiry slip ▲

LIGHT REFLECTOR
screws in standard socket

Made with an inside surface of titanium-white porcelain enamel, the Jiffylite reflector screws into any standard light socket. It has a two-piece plug and socket, with lamp screwing into the reflector which in turn screws into the socket. High reflectance permits use of lower wattage lamp bulb. Reflector, which has a depth of 3 in., is made in 10 and 12-in. diameters. Made by **Jones Metal Products Co.**, Abolite Lighting Div., West Lafayette, O.

▲ For more details circle NED-486 E3 on enclosed inquiry slip ▲



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read what users say about CMD anti-scoring lubricant

Among technical men all over the country, CMD has become the standard for extreme pressure, anti-scoring lubrication. These men have found that they can get more efficient lubrication for a longer time... ...and get longer life out of their equipment too. People who have used and tested CMD are your best proof of its reliability.

"We have been using your Anti-Scoring Center Point Lubricant on all ejector, return and guide pins: and we highly recommend this lubricant to anyone having trouble with scored and broken pins of this type on die cast dies." *Die Manufacturer*

"We have tried out your CMD Anti-Scoring lubricants in both grease and oil in comparison with another brand claiming to be the world's best, for the purpose. We are happy to report that we have found your product superior in remaining in its protective position under sustained heavy loads for the longest periods of time of any material we have tried for this purpose." *Engineering Consultant*

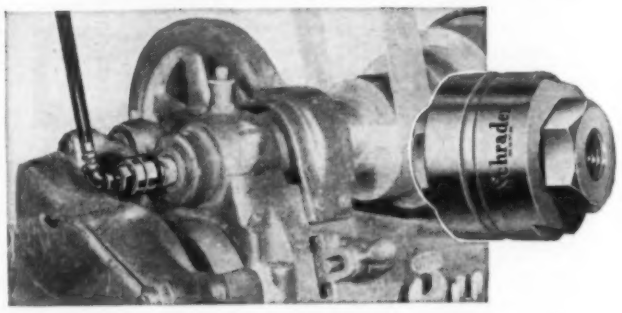
"Some time ago you very kindly sent to us some samples of your CMD Center Point Lubricants. These have been carefully tested in a number of applications besides the lubricating of centers, and we are pleased to say that the results have been very satisfactory even in cases where other well known high pressure lubricants have failed in a very short time." *University Dept. of Physics*

Sample Kit Available for Your Trial

CHICAGO MANUFACTURING & DISTRIBUTING CO.
1902 West 46th Street, Chicago 9, Illinois

▲ For more details circle NED-488 E3 on enclosed inquiry slip ▲

TRANSMITS AIR PRESSURE THROUGH ROTATING PARTS



Where it is necessary to transmit line pressure or partial vacuum from a rotating member to a fixed unit, you will find **Schrader Rotating Pressure Joints** the answer. These compact, air-tight units handle a variety of gases, liquids, as well as compressed air. Free rotating action on one side is possible while the line connections on the other side are in a fixed position. Ball bearing construction assures a minimum of rotating friction. They measure 2½" in overall length. Available with ¼" and ⅜" N.P.T. threads.

Write today for your copy of the Schrader catalog, which contains full description.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Ave., Dept. E-32, Brooklyn 38, N. Y.

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1.5/1000ths of an inch in tissue protection!

*Glassware courtesy The Cambridge Glass Company, Cambridge, Ohio.

Protecting fragile glassware like this against scratching and other damage during shipment is just one of many successful uses for Crystal Tissues. What's your product? Aluminum pans? Moulded items? Hardware? Something else? Crystal Tissues may be the most economical solution to your wrapping and packaging problems. Write us for the name of your local Crystal distributor. He'll show you all types, grades and weights—or develop a special tissue if required.

THE CRYSTAL TISSUE COMPANY
MIDDLETOWN, OHIO

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You don't need to bolt machines down!

Put them on Vibra-Mount Felt *and SAVE YOUR FLOORS*

In most cases machines placed on Vibra-Mount Felt do not need to be bolted down. The strong Vibra-Mount adhesive between felt and floor and felt and machine holds firmly, preventing "walking." This method of mounting is simple, fast, and inexpensive. And there is a great big plus value in reduction of vibration, as much as 85%! Save your floors, lessen machine down-time, stop shaking employees and machines. When installing new machines or relocating your present equipment, use Vibra-Mount Felt. Simple details and further information will be found in the booklet "How to Reduce Vibration." Write for it on your company letterhead.

*T.M. Reg

American Felt Company

TRADE MARK

GENERAL OFFICES: 62 GLENVILLE ROAD, GLENVILLE, CONN.

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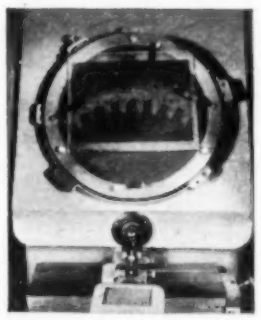
NEW CONCEPTS IN FINE-PITCH GEAR SUPPLY!

RYNEL

GEARS WITH A PEDIGREE



DESIGNERS AND SUPPLIERS
Electronic
Instrument
Communication
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Appliance
FINE-PITCH GEARS

Inspection Laboratory Assures Precision Performance

A complete record of precision specifications from blanks to finished teeth is maintained on all Rynel gears. Each operation is checked by skilled gear inspectors in a completely modern inspection laboratory. Roll, tooth profile, spacing, lead, concentricity . . . it's all down in the record so you can be sure of precision to the exact degree in your fine-pitch gear performance. Specify Rynel Gears for your exacting fine-pitch requirements. They're pedigreed for your performance. Send Blueprints to Rynel Engineers for proposal or Design Suggestions.

A Rynel Engineer will visit you the same day you call.

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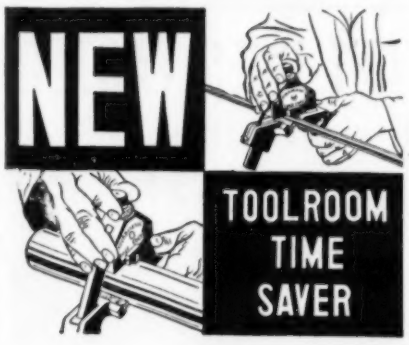
SPUR - HELICAL - WORM - WORM GEAR - INTERNAL SEGMENT - RATCHET - STRAIGHT BEVEL GEARS

For more details circle NED-492 E3 on enclosed inquiry slip

NEW



TOOLROOM TIME SAVER

SIMPLE TO SET UP AND OPERATE ★ LIGHT WEIGHT ★ VERSATILE ★ ACCURATE ★ INEXPENSIVE

Odee-Hone *A Tool for Honing External Surfaces*

One tool for any cylindrical surface from ½" to 2½" in diameter—any length • Removes Stock • Holds accurate size • Generates—round, straight surfaces • Develops any degree of surface finish—without chatter.

USE WITH ANY LATHE, DRILL PRESS OR ELECTRIC DRILL

Manufactured by

MICROMATIC HONE CORPORATION

8100 SCHOOLCRAFT, DETROIT 4, MICHIGAN

Guilford, Conn. • Rockford, Ill. • Los Angeles 21, Calif. • Brantford, Ontario, Can.

For more details circle NED-493 E3 on enclosed inquiry slip

TRACTOR CAB
for operator comfort in all weather

Operator comfort for all outdoor work involving Huskie and Super Huskie tractors is assured by this tractor cab. Clear visibility is obtained with one-piece shatterproof windshield glass. Cab is available with or without removable side doors and rear panel, and the 12-gage all steel body can be supplied for mounting on customer's own tractor. Optional attachments include electric lights, electric windshield wiper, heater, defroster system and directional turn indicators. Made by **Mercury Mfg. Co.**, 4038 S. Halsted St., Chicago 9, Ill.

For more details circle NED-494 E3 on enclosed inquiry slip

HIGH SPEED STEEL TOOLS
high tensile strength, hardness

Square and flat tool bits and cutoff blades, hollow mills, form facing tools, counterbores, step reamers, seating tools, formed facing cutters, ground flats, squares, dovetails and circular tools are items available in Lucky 7 and Tuf-Cut high speed steels. Former is vanadium type and latter is moly type steel, both with very high tensile strength and Rockwell hardness of C-64 to C-66. Square bits are stocked in sizes from 3/16-in. square by 2 in. long to 1¼ in. square by 7 in. long. Flats are available from ¼ x ½ x 4 in. to 1 x 1½ x 7 in. Straight cutoff blade sizes are carried from 1/16 x ½ x 4 in. to 5/16 x 1 x 6½ in. Special sizes are made to specifications. Made by **Plew Tool Co.**, 757 S. Line St., Columbia City, Ind.

For more details circle NED-495 E3 on enclosed inquiry slip

GLUE PROCESSING MACHINE
provides constant supply of glue

Visco-Mat glue processing machine, designed for users of large quantities of the adhesive, provides a constant supply of glue of uniform viscosity. It mixes the glue to the viscosity required from bulk dehydrated glue. Compression and piping system can be installed to reduce handling costs. Made by **Triangle Package Machinery Co.**, 6663 W. Diversey Ave., Chicago 35, Ill.

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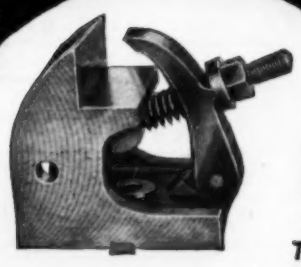
CUT SET-UP COSTS HUNDREDS OF WAYS WITH



HART MILLING FIXTURES

"Masters of A Thousand Set-ups"

Eliminate the need for many special expensive jigs and fixtures.

You will save time and money on most set-ups with Hart Milling Fixtures. They hold round, hexagonal, octagonal or square stock, for miller, shaper, drill press and tapper; they reduce set-up time and speed production. Hart Milling Fixtures are made in four useful sizes, and designed to be used in horizontal or vertical position. Let us send you full description and prices.

Write for illustrated folder

WALTER W. FIELD & SON, INC.

39 Hayward St., Cambridge 42, Mass.

For more details circle NED-497 E3 on enclosed inquiry slip

Newest Data on Cost-cutting Door Efficiency

This all-new 1953 catalog gives you up-to-the-minute information on how to save maximum space, cut costs, boost efficiency and get more protection at doorways, in old or new buildings. In addition to Kinnear Steel Rolling Doors, it tells all about Kinnear Steel Rolling Fire Doors, sectional type Kinnear Wood and All-Steel RoL-TOP Doors, and the protective Kinnear Steel Rolling Grilles. *Write TODAY for FREE catalog on—*

KINNEAR Steel Rolling DOORS

The KINNEAR Mfg. Company

FACTORIES:
2380-2400 Fields Avenue Columbus 16, Ohio
3017 Yosemite Ave. San Francisco 24, Calif.

KINNEAR ROLLING DOORS *Saving Ways in Doorways*

For more details circle NED-498 E3 on enclosed inquiry slip

Introducing NEW IDEAL *Cush'N-Blo* SOFT-FACE HAMMERS

the Safer Hammer that Saves the Surface!

• New IDEAL Cush'N-Blo Hammers are true SAFETY tools, designed and engineered to give you better soft-face hammer performance—*and save you money at the same time!* Formulated of special plastic, the replaceable tips outwear ordinary soft-face materials—often by more than 10 to 1. They cannot chip or mushroom under heaviest blows—or "let go" flying particles to endanger workers. Tips are *spark-proof* and securely locked into *spark-proof* heads. They are not affected by oil, grease, gasoline or ordinary industrial acids.

Cush'N-Blo Hammers are carefully balanced for maximum accuracy and driving force. They turn out *more* work and *better* work with minimum effort because they reduce fatigue by reducing rebound.

SOLD THROUGH LEADING DISTRIBUTORS
See Them Now or Mail Coupon for Full Information

• A HAMMER FOR EVERY JOB
5 Diameters
14 Weights
Regular or Shot-Loaded

IDEAL INDUSTRIES, Inc.
1032 Park Avenue, Sycamore, Illinois
Please send catalog data and full description of your Cush'N-Blo Hammers.
Name_____
Company_____
Address_____
City_____ Zone____ State____

For more details circle NED-499 E3 on enclosed inquiry slip

NOW A NEW LINE OF Automatic Skylift Trucks AT NEW LOW PRICES

COMPARE THESE ADVANTAGES

FEATURE	BENEFIT
Only Automatic Skylifts have Silicone insulated motors	Max. protection against motor damage from overheating
Ball bearing mounted carriage and upright rollers	Friction-free lift, less wear —minimum current draw
Full magnetic control with plug-proof protection	Safety—lowest maintenance
Spur and Hypoid gear drive fully enclosed in oil bath	Maximum efficiency under all load conditions
Patented duolift rams with leakage return	Exclusive! Protects ram plunger from dirt, damage
Highest lift speed of any electric truck	Does more work—faster
Heavy section rolled manganese alloy steel uprights	Better wearing quality, proper flange strength
Hydraulic Safety Fuse	Locks load in position if line ruptures
Greatest accessibility for maintenance	Minimum down time, lowest maintenance costs

ONLY AUTOMATIC HAS THEM ALL

Automatic

LARGEST EXCLUSIVE BUILDER OF ELECTRICAL INDUSTRIAL TRUCKS

Before you buy any lift truck, get the complete money-saving facts on the amazing materials handling savings these new Automatic "Standard" Skylifts will bring to *your business!*

2000 lb. model, only....$3575*

F.O.B. Chicago *Hoistlift Model PRICE IN U.S.A.

61 West 87th Street, Dept. E-3 Chicago 20, Illinois

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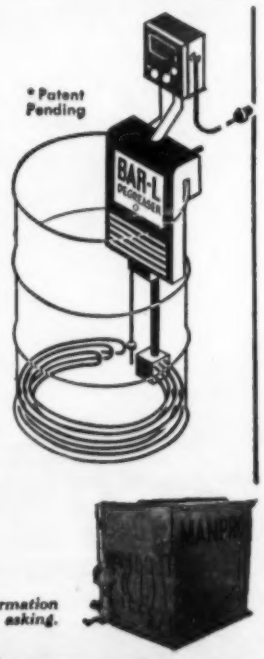
BAR-L* VAPOR DEGREASER

Economical Trouble-Free Parts Cleaning!



*Patent Pending

Bar-L Vapor Degreaser cleans all metal parts, removes sludge, grease, dirt in seconds! And your parts come out warm and dry.

So designed that the heating element is in no danger of damage from dropped parts or insulated by settled residues, Bar-L Degreaser cleans anything that will fit into the solvent drum!

Economy of operation is assured by a record of trouble-free service. Almost 100% recovery of the solvent is made possible by the design of the condenser which returns the solvent to the boiling chamber. Continuous, high production is a fact with Bar-L!

If your requirements indicate tanks larger than the standard 55 gallon drum, several units may be used together in larger tanks.

Literature on standard degreasers and information on custom machinery - is yours for the asking.

Write or wire today!

Manufacturers Processing Co.

METAL CLEANING CHEMICALS AND EQUIPMENT

1360 HILTON ROAD DETROIT 20, MICHIGAN

▲ For more details circle NED-501 E3 on enclosed inquiry slip ▲

Backstand belts cut costs!

Learn more about this money-saving method

The backstand-belt method of metal polishing is being used in more and more plants. Why? Because it saves time, cuts costs. Belts cut faster, cooler than set-up wheels – and cut down on the number of your operations. To learn more about this modern method of metal finishing, send for Armour's free booklet, "Backstand-Belt Polishing."

mail this coupon today

Please send booklet "Backstand-Belt Polishing."

Name_____ Title_____

Company_____

Address_____

City_____ Zone____ State____

ARMOUR *Coated Abrasives*

Armour and Company • North Benton Road • Alliance, Ohio

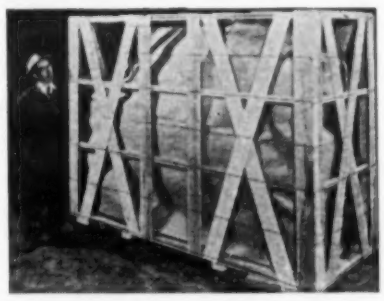
▲ For more details circle NED-502 E3 on enclosed inquiry slip ▲

CORNER GUARD
steel unit slips under load

Finished in bright yellow and black, the Ran-Guard steel corner guard is provided with a steel gusset that slips under the load to prevent falling. Adaptable to all types of storage, skids, pallets and other uses, the guard is made in two sizes—12 x 12 x 24 in. and 15 x 15 x 30 in. Made by **Randolph Metal Products Co.,** 3829-43 W. 43rd St., Chicago 32, Ill.

▲ For more details circle NED-503 E3 on enclosed inquiry slip ▲

WIREBOUND CRATES
made in large heavy duty sizes



Installation of machinery capable of producing heavy gage wire stitching on large dimension sections has made possible manufacture of large heavy duty wirebound containers. Illustrated container, considered near top-limit for this type of packing, is designed to carry equipment weighing 3000 lb. It measures 63 x 93 x 39 in. Made by **American Box Co.,** 1917 W. Third St., Cleveland 13, O.

▲ For more details circle NED-504 E3 on enclosed inquiry slip ▲

PLASTIC CABLE SUPPORTS
withstand up to 150° F

Temperatures up to 150° F are withstood by EthoLoc loop type plastic cable supports which require only one fastener for installation. Clips are made from Dow ethyl cellulose in sizes from ⅛ to 1¼ in. diameter. Rounded edges grip securely without chafing. Light weight type can also be obtained in several sizes up to ¼ in. diameter. Made by **Weckesser Co.,** 5255 N. Avondale Ave., Chicago 30, Ill.

▲ For more details circle NED-505 E3 on enclosed inquiry slip ▲

RANDALL

THE ONLY PILLOW BLOCK WITH THESE OUTSTANDING FEATURES

WRITE FOR CATALOG NO. 109

DOUBLE LUBRICATION
QUIET OPERATION
SELF ALIGNING
LOW COST

Randall "deep well" pillow blocks are available for all standard shaft sizes in one-piece steel or two-piece cast iron housings for light, normal or heavy duty. The "deep well" ball assembly is also sold as a separate unit for integral inclusion in other original equipment applications.

BRONZE BAR STOCK
BRONZE BUSHINGS
PILLOW BLOCKS
SHEET LUBRICATOR

Randall

GRAPHITED BEARINGS
THRUST WASHERS
SAFETY COLLARS
BRONZE CASTING

RANDALL GRAPHITE BEARINGS, INC.

1007 S. Greenlawn Ave. Lima, Ohio

▲ For more details circle NED-506 E3 on enclosed inquiry slip ▲

clean

Honan-Crane

HYDRAULIC OIL PURIFIER

- Removes Solid Abrasive Contamination
- Removes Corrosive Products of Oxidation
- Prevents Sludging
- Keeps Oil CLEAN and SAFE to Use Indefinitely

Sizes for direct connection to individual machines—mobile units for general service

All Honan-Crane equipment is sold on a performance guaranteed basis

▲ For more details circle NED-507 E3 on enclosed inquiry slip ▲

meet the bright new MATHEWS

LOADSTAR

a spectacular performer in the fine trolley field

★ Top-quality precision wheels are the heart of this rugged newcomer to the 4" trolley conveyor field. If you demand stamina and exceptional performance in your overhead conveying equipment, the No. 4 Mathews Loadstar was developed for you. Ask for Bulletin LS1, announcing and describing this new trolley conveyer. It was designed to meet the requirements of the most exacting buyer.

MCC

MATHEWS CONVEYORS

GENERAL OFFICES: *Mathews Conveyor Company, Red Bank, N. J.*

PACIFIC COAST DIV. *Mathews Conveyor Co. West Coast, San Carlos, Calif.*

CANADIAN DIV. . *Mathews Conveyor Company, Ltd., Hamilton, Ont.*

Engineering Offices or Sales Agencies in Principal American and Canadian Cities

▲ For more details circle NED-508 E3 on enclosed inquiry slip ▲

PRODUCTION GOES FASTER

...with cost-cutting WORK-O-MATICS*!

WHAT RETARDS PRODUCTION?—waste motion at machines, tiring stoop-bend-stretch methods, needless repetitive handling of parts, supply delays, etc.! Look how the WORK-O-MATIC system cancels these losses . . .

With the Work-O-Matic, parts flow to the machine operator at efficient work-level height. The stand's front reservoir tray avoids "production lag" while empty boxes are being replaced. And lift trucks supplying Work-O-Matic stations can schedule deliveries to maximum efficiency.

But get *all* the facts . . . on increased storage capacity . . . mechanical dumping . . . better tiering . . . simplified aisle handling . . . and production increases of 50% and more! Write to The Union Metal Manufacturing Co., Canton 5, Ohio, for Folder MH-809 and T & M Studies.

*Patent No. 2,445,038. Other patents pending.

UNION METAL

Materials Handling Equipment

▲ For more details circle NED-509 E3 on enclosed inquiry slip ▲

HYDRAULIC OIL STOPS

downtime and costly repairs to hydraulic equipment

Get FREE Booklet

"Hydraulic Bulletin" describes profitable use of Honan-Crane Purification in many hydraulic applications. Write for yours!

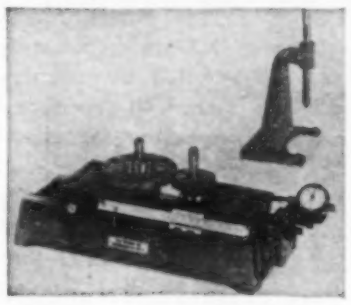
HONAN-CRANE CORPORATION
405 Wabash Avenue • Lebanon, Indiana
A Subsidiary of
HOUDAILLE-HERSHEY CORP.

WORLD'S LEADING OIL FILTER MANUFACTURER

In Canada: E. W. PLAYFORD, LTD., Montreal 28
W. E. MICKLETHWAITE, Toronto 18

▲ For more details circle NED-509 E3 on enclosed inquiry slip ▲

SPUR GEAR TESTER checks gears in various ways



Errors in center distance, eccentricity, spacing errors, presence of burrs and back lash can be determined by this spur gear tester. A floating head which rests on precision steel balls for sensitivity contacts a dial gage reading in 0.0005-in. increments. Slide is held against the gage by a spring which is adjustable to the desired pressure. A rustproof scale and vernier reading in 0.001-in. measure center distance. Slides are drilled and tapped for mounting of vertical center supports for inspection of pinion gears. Gears to be tested are placed on fixed arbors or studs. Readings obtained on dial are actual test of the gears. By spinning two gears, running quality can be determined. Made by **George Scherr Co.**, Dept. NED, 200 Lafayette St., New York 12, N. Y.

▲ For more details circle **NED-510 E3** on enclosed inquiry slip ▲

SHEET WORKING MACHINE performs many operations

Reading, straight cutting, folding, joggling, circular and slot cutting, nibbling, and irregular, free-hand and louver cutting are performed with few tools by the Universal plate and sheeting working machine. Swedish made, it has an enclosed mechanism that operates in an oil bath. Tools are easily changed and can cut such materials as mild and stainless steel, aluminum, brass and fiber within its capacity. Three models, with 1/8, 15/64 and 5/16-in. cutting capacities and 28½, 40 and 49-in. throat depths, are offered. Various cutting tools, adjusting gages and spanners are standard. Offered by **Eric S. Johnson Co.**, 232 E. Ohio St., Chicago 11, Ill.

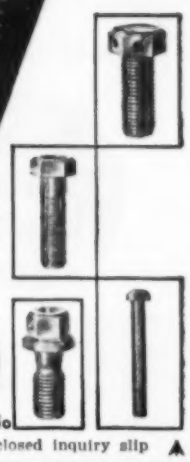
▲ For more details circle **NED-511 E3** on enclosed inquiry slip ▲

DO YOU KNOW? You'll be able to witness the operation of a two-way industrial radio communication system involving equipment in the booths of eight materials handling equipment manufacturers at the forthcoming fifth National Materials Handling Exposition, May 18-22 at Convention Hall in Philadelphia. This G-E system will simulate radio control operations on an FCC-approved frequency and license. Radio communication systems made by General Electric Co., Electronics Park, Syracuse, N. Y.

▲ For more details circle **NED-512 E3** on enclosed inquiry slip ▲

cold forged metal fasteners

• For (√) high quality material, (√) precise machining, (√) fast assembly, and (√) good appearance, specify CHANDLER cold forged metal fasteners. They are manufactured from tested high quality alloy steel by the most modern machinery and methods. Every fastener must pass rigid inspection to make sure it meets your specifications. This uniform high quality makes assembly faster, and smoothly finished heads assure good appearance of the completed assemblies.



Specialists in Alloy Bolts . . . Grinding to close tolerances . . Drilled heads or shanks. Diameters 1/4" 5/16" 3/8" to 3" in length and diameters 7/16" 1/2" 9/16" to 5" in length. 960-CH

Manufacturers of Place Self Locking Bolts

Chandler Products Corp.

1495 Chardon Road • Cleveland 17, Ohio

▲ For more details circle **NED-514 E3** on enclosed inquiry slip ▲

ALKON HYDRAULIC-CONTROLLED AIR-POWERED DRILL UNIT

cuts drilling costs!

Multiple-hole drilling requiring many separate production runs may now be combined in one operation with the new, extremely compact Alkon Drill Unit!

Many units may be mounted as close as 2" parallel centers, and by actuating a common operating switch, all units automatically advance quickly to the work, are governed through the work by a unique "Hydraulic Monitor", (at preselected feed speeds), to pre-set depths. Upon completion of stroke, rapid automatic reverse, (eliminating dwell), returns each unit individually.

Cycle after cycle, you can depend on the ALKON AIR-POWERED DRILL UNIT for high speed, consistently accurate drilling. *Investigate today! Write for brochure—NED*

ALKON *products corporation*
698 EAST 142nd ST. • NEW YORK 54, N. Y.

▲ For more details circle **NED-515 E3** on enclosed inquiry slip ▲

Multi-purpose, drop-bottom Work-O-Matic box is quickly, easily positioned on production stand for automatic discharge of parts at efficient work level.

See this product at BOOTH No. 1106
Materials Handling Exposition, May 18-22, Philadelphia

▲ For more details circle **NED-509 E3** on enclosed inquiry slip ▲

MYSTIK® BRAND TAPES • SELF-STIK

14 Colors!

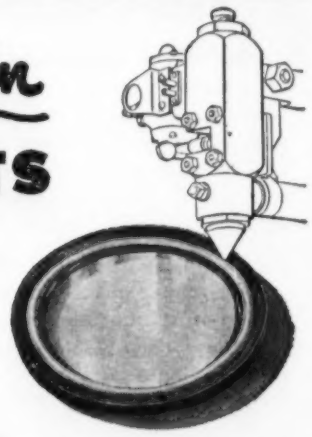
To identify . . . code . . . decorate . . . trim

Self-Stik Mystik® Brand Cloth Waterproof Tapes are available in 14 colors . . . *white, black, red, green, blue, yellow, brown, wine, pink, tan, gray, light blue, light green* and *olive drab*. No other tape offers this range of colors to multiply the many uses in your operations. Takes the place of permanent painted stripes, decorations, on many products. Makes decorative hinges, bindings. Write for information and free samples. Mystik Adhesive Products, 2657 North Kildare Avenue, Chicago 39.

© Mystik Adhesive Products, 1952 Trademark Mystik Registered.

▲ For more details circle **NED-513 E3** on enclosed inquiry slip ▲

Flowed-in GASKETS



can cut costs and improve results!

Now! *Flow* gaskets into place at speeds up to 300 per minute. Gaskets become integral with the part — meet a wide range of problem conditions.

SIMPLE APPLICATION. Instead of installing pre-cut gaskets by hand, you merely *flow* a synthetic resin or rubber compound into position (horizontal or vertical surface). After baking, compound becomes solid, rubbery.

BUILT-IN RESISTANCE PROPERTIES. You create effective seals against weather, gases, solvents, moisture, oils, hydraulic fluids, pressure. Form shock-resistant cushions.

IMPORTANT ECONOMIES. You eliminate stamping, gluing, crimping, welding, and other time-consuming operations. Save on materials, too.

SEND FOR BOOKLET NOW.

DEWEY and ALMY Chemical Company
Cambridge 40, Mass.

▲ For more details circle **NED-516 E3** on enclosed inquiry slip ▲

THE HEAT-TREATED ELECTRIC FURNACE STEEL SHOT

SOLID
TOUGH
UNIFORM
EFFICIENT

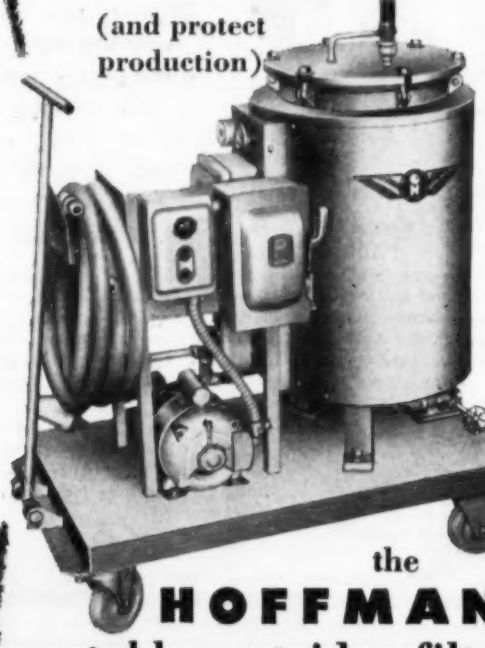
lasts longer
causes less wear
cleans faster
gives lowest cleaning cost

Send today for Bulletin 89

American
WHEELABRATOR & EQUIPMENT CORP.
508 S. Byrkit St., Mishawaka, Indiana

▲ For more details circle NED-517 E3 on enclosed inquiry slip ▲

GOES ANYWHERE
to Keep Oil Clean
(and protect production)

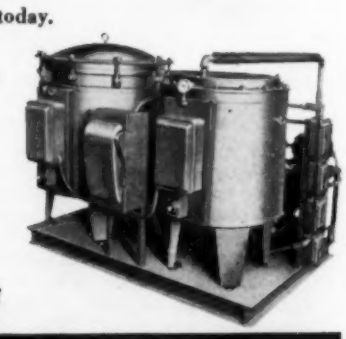


the
HOFFMAN
portable cartridge filter

Fills the need for periodic, scheduled filtration of oils where quantity does not warrant separate, continuous filtration. Easily moved from one machine to another. Flexible hose with quick connecting couplings attaches to the oil supply of the machine. Operates on a recirculation basis for such time as is required to fully recondition the oil.

For use on hydraulic oils (hydraulic presses, hydraulic machine tools, injection moulding machines, die casting machines) and quench oils. Two sizes: 30 and 60 g.p.h. capacities for repackable or throwaway cartridges. Fuller's earth or cellulose.
Write for Bulletin A-916 today.

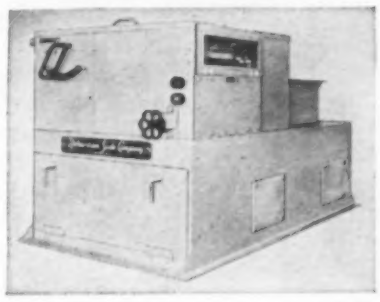
For Complete Purification of Used Oils —
HOFFMAN OIL CONDITIONER
25 to 600 g.p.h. capacity
Removes solubles and insolubles
Write for free Bulletin A-667



TOPS IN VALUE SINCE 1905
Hoffman
INDUSTRIAL FILTRATION EQUIPMENT & SERVICE
U. S. HOFFMAN MACHINERY CORP., 225 LAMSON STREET, SYRACUSE 6, N. Y.
In Canada: Canadian Hoffman Machinery Co., Ltd., Newmarket, Ont.

▲ For more details circle NED-518 E3 on enclosed inquiry slip ▲

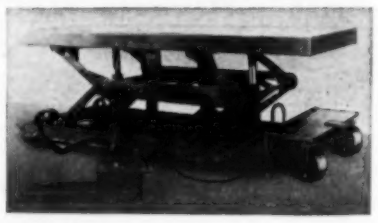
CONSTANT WEIGHT FEEDER
gives continuous flow of material



This solids feeder delivers an uninterrupted flow of material to processing equipment at a constant rate, adjustable up to 3000 lb per min. Typical products which can be handled include feed, grains, limestone and dry free-flowing chemicals. Operation is fully automatic, and amount of product delivered during any 2-min run varies less than 1 per cent. Desired delivery is set on poise beam. One model has 9-in. stream width and adjustable delivery range of 75 to 1500 lb per min, while other has 18-in. belt and will handle 150 to 3000 lb per min. Made by **Richardson Scale Co.**, Van Houten Ave., Clifton, N. J.

▲ For more details circle NED-519 E3 on enclosed inquiry slip ▲

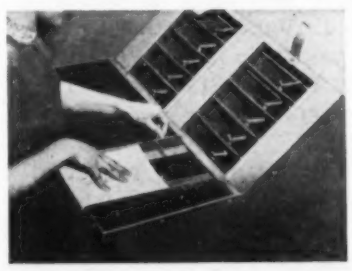
SHEET FEEDING TABLE
portable unit holds 3 to 10 tons



Feeding of large, heavy sheets to presses, brakes or shears is facilitated by this mobile Double Ram sheet feeding table featuring a load capacity of 3 to 10 tons. Swivel casters and smooth-rolling wheels give maximum maneuverability. Table has 36 x 96-in. top and is hydraulically operated by multiple-speed foot pump. It is also furnished with electric drives. Made by **Rack Hydraulic Equipment Corp.**, Dept. N-1, Connellsville, Pa.

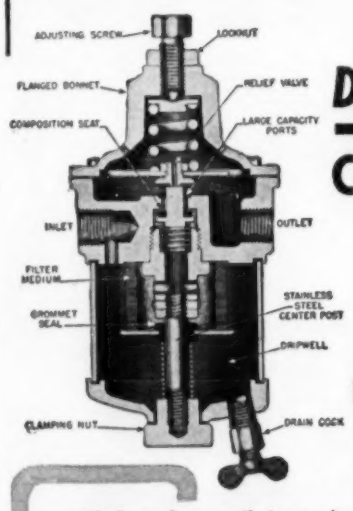
▲ For more details circle NED-520 E3 on enclosed inquiry slip ▲

COLLATOR
for various sized papers



Pages from 3 x 8 in. to 19 x 24 in. can be collated into sets by the adjustable trays designed for operation with any Thomas collator. One person can assemble from 2 to 16 papers with the device, which can be installed and adjusted to the desired size in a few seconds. Papers and cards of varying sizes can be collated in the same operation. Made by **Thomas Collators, Inc.**, Dept. M, 30 Church St., New York 7, N. Y.

▲ For more details circle NED-521 E3 on enclosed inquiry slip ▲



DOUBLE VALUE
CONO AIRPAK
—REGULATES
—FILTERS
IN A SINGLE UNIT

The advantages of a high quality large capacity reducing valve with safety relief, and an efficient air filter, are combined in a single compact unit. Save space and installation costs by eliminating the use of separate units. Pressure gauge can be mounted integrally. Construction is rugged, corrosive resistant and long lasting. Available in a variety of ranges and dripwell capacities for production equipment, instruments and controls, spraying equipment, and pneumatic gauges. Write for BULLETIN FH-15 to get full details.

CONOFLOW CORPORATION
2100 ARCH ST.
PHILADELPHIA 3, PA.

Cono-Controls

CC-116

▲ For more details circle NED-522 E3 on enclosed inquiry slip ▲

NEW SKINNER SOLENOID VALVE
EXPLOSION PROOF
TYPE X5

THE new Skinner X5 Solenoid Valve is basically the same as the widely accepted and tested V5, but modified to a construction that is Underwriters' approved for Class I, Group D hazardous locations. Small size and lightweight features are retained, and the X5 is low in price because of the many parts which are interchangeable with other Skinner valves. Rating is 10 watts max.; soft, spring loaded seals prevent leakage; internal parts are stainless steel; wide variety of port locations in 1/8" and 1/4" size; most types available for metering; for AC or DC in a wide range of voltages and frequencies; can be mounted in any position; supplied as two-way normally open or closed, three-way normally open, closed or directional flow. *Write today for details!*

SKINNER ELECTRIC VALVE DIV.
THE SKINNER CHUCK COMPANY
112 Edgewood Ave., New Britain, Conn.

▲ For more details circle NED-523 E3 on enclosed inquiry slip ▲

FREE CATALOG!

available to you who are interested in the facts on open steel flooring.

Up to the minute information on the hows and whys of construction and installation of Tri-Lok Open Steel Flooring may now be at your finger-tips. Here is a four-page catalog designed to aid you in selecting the best types and styles of open-steel flooring for your particular construction project.

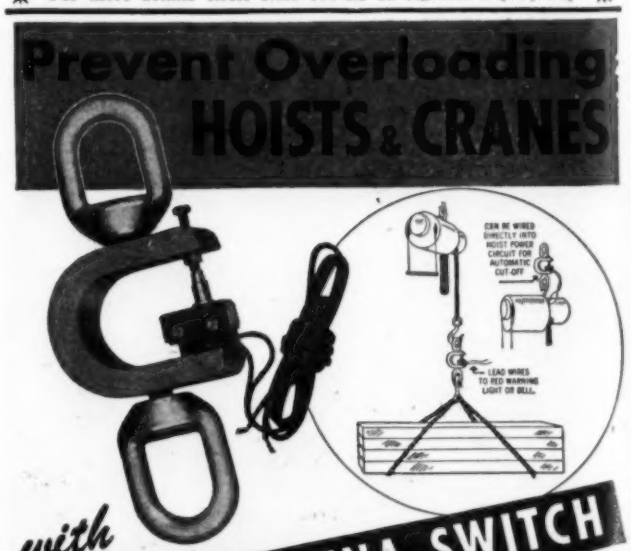
IN THIS CATALOG YOU'LL FIND
- Tables of Safe Loads
- Specifications required for open steel flooring installation
- Types of Tri-Lok Open Steel Flooring available
- Information concerning construction, sizes, strength and adaptability of Tri-Lok Open Steel Flooring

FOR YOUR COPY, WRITE FOR BULLETIN PW 1102

DRAVO
CORPORATION
National Distributor for THE TRI-LOK CO.
Dravo Building, Fifth and Liberty Avenues, Pittsburgh 22, Pa.

▲ For more details circle NED-524 E3 on enclosed inquiry slip ▲

Prevent Overloading HOISTS & CRANES



with
DILLON DYNA-SWITCH

When load limit is exceeded, Dyna-Switch trips a sensitive micro-switch which may be connected to a warning bell or light. If Dyna-Switch is connected into the motor, the overload automatically cuts motor out, and load must be returned to floor and surplus weight removed before pickup can be completed.

Top working range is 10,000 lbs. Set at factory for any desired cutout point, but can also be re-set in the field if working conditions change. Low in cost—always on guard. Write or wire today for illustrated bulletin.

W. C. DILLON & CO., INC.
14620NE KESWICK ST. • VAN NUYS (Sub. of Los Angeles), CALIF.

▲ For more details circle NED-525 E3 on enclosed inquiry slip ▲

Since World War I, welding has been our business and today every U. S. jet engine manufacturer is a user of "American Welding" component parts. If your requirements involve either fusion or resistance welding of ferrous or nonferrous metals, drop a line to our Product Development Division. We can provide complete designing, engineering, metallurgical and machining facilities and will be glad to put our 34 years of welding experience to work on your problem.

THE AMERICAN WELDING & MANUFACTURING CO.
170 DIETZ ROAD • WARREN, OHIO

For more details circle NED-526 E3 on enclosed inquiry slip

YOU'RE SAFE WITH THE

NEW SUPER-TOUGH

WILLSON SAFETY HAT

THE NEW WILLSON SAFETY HAT is entirely new in design, material and method of manufacture . . . tough as metal and more resilient! Here are some other outstanding features of the new Willson Super-Tough* Safety Hat:

Streamlined Contour—deflects objects more effectively and provides a greater safety "pocket" inside.

New Suspension Design—adjustable "hammock" headband is suspended *inside* at 6 points. No exposed rivets or lacing—no holes through hat.

Comfortably Cool—space between headband and shell provides ample air circulation for wearer.

Moisture Resistant—practically 100% waterproof and resists many caustics and acids.

Passes all required tests with an extra margin of safety!

More than 300 safety products carry this famous trademark

WILLSON®
Established 1870

Write for your copy of the new bulletin describing the Willson Super-Tough* Safety Hat.

*trademark

WILLSON PRODUCTS, INC., 219 Washington Street, READING, PENNA.

For more details circle NED-527 E3 on enclosed inquiry slip

BRUNING ELECTRIC ERASER

Saves hours of work... Protects valuable drawings

ERASER CAN'T FLY OUT . . . valuable drawings are safe with a BRUNING Electric Eraser. Exclusive *7-inch* eraser feeds through hollow shaft — can't fly out and let ferrule gouge paper.

SAVES TIME... adds extra hours of working time by eliminating tiresome, finger-cramping manual erasing.

RUNS COOL AND QUIET . . . permanently lubricated bearings mean no overheating in steady operation, are mounted in rubber for vibration-free performance. Only one moving part.

EASY TO USE... lightweight aluminum housing fits fingers like a pencil. Eraser is extended or replaced in seconds.

Phone or write Bruning—there's an office near you—for more facts and figures on how to save time and tempers with Bruning Electric Eraser. CHARLES BRUNING COMPANY, Dept. S53 4700 Montrose Ave., Chicago 41, Ill.

A-3-3

BRUNING
Everything for the Engineer and Draftsman

For more details circle NED-528 E3 on enclosed inquiry slip

Who Else Needs NED?

Is there another engineering, maintenance or specifying official in your company who should be receiving NEW EQUIPMENT DIGEST regularly? If so, just give us his name and title. There's room on the postpaid self-mailing slip which is bound in this issue for you to fill in the necessary information.

RHEOSTATS in 75, 100 and 150-w sizes

Added to the H-50 rheostat line (*April '52, NED*) are 75, 100 and 150-w sizes, all designed to comply with current standards of JAN-R-22, Underwriters' Laboratories, RTMA and NEMA. Model H-75, H-100 and H-150 rheostats incorporate such features as brush control which automatically adjusts tension to complete, continuous contact; positive spring action which eliminates strains tending to bind shaft in bushing; and high flexibility with no risk of backlash. Models are bonded with high-temperature enamel, are thermo-shockproof and heat resistant, have high terminal strength and high safety factor. Made by **Hardwick, Hindle, Inc.,** 38 Hermon St., Newark 5, N. J.

For more details circle NED-529 E3 on enclosed inquiry slip

PORTABLE CONVEYOR services balconies and upper floors

With an undercarriage built to permit overhang, model SLJ-40 Speedlift Jr. portable power belt conveyor can be used to load and unload from balconies and upper floors. It is easily maneuverable in either horizontal or inclined position, cranking up or down to adjust to any angle. The conveyor box rides on trolley wheels during the adjustment process. Weight is so distributed that it cannot tip forward. Belt movement is reversible, operating at standard 50 fpm or at variable speeds. Model shown is 16 ft long with 12-in. rubber ruff-top belt, but other lengths and belt widths are available. Made by **Speedways Conveyors, Inc.** 1246 Niagara St., Buffalo 13, N. Y.

For more details circle NED-530 E3 on enclosed inquiry slip

when you go courting lower costs

first check the

SPRAY NOZZLES

used in the system

More exact spray nozzle design...with nozzle capacity better adapted to the character of the liquid being sprayed can often materially improve spraying operations and lower your costs. That's why Spraying Systems Spray Nozzles are worth checking. Thousands of types and capacities to choose from. Designed and built by America's leading spray nozzle manufacturers. The most widely used nozzles in America today among equipment builders and engineering firms.

WRITE TODAY . . . let us send you General Catalog No. 22 and Pneumatic Atomizing Nozzle Catalog No. 23. Scores of Data Sheets also available covering specialized applications.

SPRAYING SYSTEMS CO.
3211 Randolph Street
BELLWOOD • ILLINOIS

For more details circle NED-531 E3 on enclosed inquiry slip

New, Larger COVER GOGGLES

fit over ALL modern glasses . . .

New CESCO series 548 and 549 Cover Goggles are 20% larger than former cover goggles. Contoured edges with wide surfaces eliminate pressure on nose, seal out flying particles or light flashes. Standard 50 mm lenses are quickly changed from front. Both chippers and welders models are well ventilated to reduce fogging. Simplified bridge adjustment. 3 headbands.

See or write your CESCO safety equipment distributor for full details

Features
- Lightweight sturdy plastic, contoured edges
- Ventilated lenses with baffled air flow
- Sideshields— Baffled for welding Perforated for chipping or grinding

CHICAGO EYE SHIELD COMPANY • 2322 Warren Blvd. • Chicago 12, Ill.

CESCO FOR SAFETY

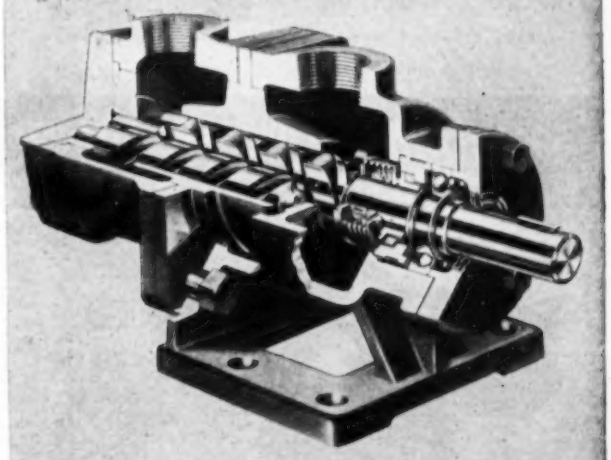
OFFICES IN: Atlanta, Birmingham, Boston, Buffalo, Cincinnati, Cleveland, Columbus, Detroit, East Orange, Houston, Kansas City, Knoxville, Little Rock, Los Angeles, Mexico City, D. F., Milwaukee, Montreal, Philadelphia, Pittsburgh, Salt Lake City, San Francisco, Spokane, St. Louis, St. Paul, Toledo, Tulsa

For more details circle NED-532 E3 on enclosed inquiry slip

DE LAVAL
IMO PUMPS

Your De Laval Field Representative can help solve your pumping problems.

Profit by his sound, versatile experience. He can aid you in selecting the IMO Pump you need... give you facts and figures on performance . . . bring valuable judgment to bear on your specific fluid handling application.



For example, De Laval-IMO Series A313B Pump handles light or viscous fluids in hydraulic systems, rotary and steam atomizing oil burners, lubrication, governing systems and similar services. Use it for capacities to 80 gpm, pressures to 275 psi and intermittent pressures to 325 psi.

IMO Rotary Pumps have only three moving parts . . . offer all these advantages: high speed operation, quietness, freedom from vibration, simplicity and reliability. Models can be furnished for almost any fluid handling problem in capacities to 750 gpm and pressures to 1,500 psig. *Ask for Bulletin LG-A which gives data in chart form on the wide range IMO line.*

DE LAVAL *IMO Pumps*

DE LAVAL STEAM TURBINE COMPANY
808 Nottingham Way, Trenton 2, New Jersey

DL194

For more details circle NED-533 E3 on enclosed inquiry slip

FOUR WAY ENTRY
STEEL BOUND
SKID BOXES

STORE LOOSE ITEMS EFFICIENTLY SAVING FLOOR SPACE BY UTILIZING AIR SPACE

Available plain or with corner tiering pockets for stacking three or four units high. Rugged arc-welded under-frames. Corner angle rounded for safety.

THE LANHAM COMPANY, MAGNOLIA & 12TH STS., LOUISVILLE, KY.

LANHAM FOR LIFETIME

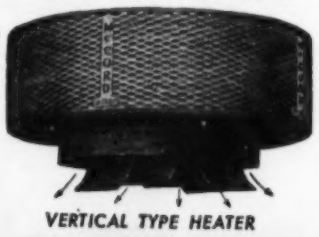
For more details circle NED-534 E3 on enclosed inquiry slip

Better Heat Distribution WITH McCORD Unit Heaters

More Heat . . .
Better Distribution

HORIZONTAL TYPE HEATER

More heat, better distribution is the answer to any heating problem. McCord, because there is a model and type to meet each particular condition, will do a better heating job. Every improvement that engineers and the experience of many users could suggest is incorporated in the improved models of McCord Unit Heaters. Due to the design and careful attention to balance a new degree of quietness has been attained. The scientifically designed spiral fin tube heating surface provides maximum heat transfer capacity.



VERTICAL TYPE HEATER

McCORD CORPORATION
2580 E. Grand Blvd.
Detroit, Mich.

Specify McCORD ON YOUR NEXT JOB

For more details circle NED-535 E3 on enclosed inquiry slip

there's more to a MEYERCORD Nameplate DECAL than meets the eye...

What the eye does NOT see is the miracle of graphic arts engineering that is a part of every Meyercord Decal Nameplate. As the illustration-diagram indicates, the Meyercord Decal starts with a specially engineered adhesive and stacks color upon color, topping it all with a tough protective coating.

The Meyercord Decal Nameplate you apply to your product is the result of vast experience and never-ending engineering improvement. Just "any" decal won't do the job. Today's multiplicity of commercial surfaces and finishes demand exhaustive pre-testing to make very sure your Meyercord Decal Nameplate lasts the full life of the product.

Meyercord Decals cut production costs when used as nameplates, trademarks, instructions, markers, wiring diagrams, safety warnings and other important applications. Write for full information about our complete technical and designing services.

Specify Meyercord Decals to identify instruct warn

Write for the big Meyercord "Mark-It" Decal Nameplate Manual... FREE
Shows hundreds of uses for durable, washable decal nameplates. The "Mark It" manual is FREE . . . request it on your business letterhead, please.

THE MEYERCORD CO.
World's Largest Decalcomania Manufacturers
DEPT. E-316
5323 WEST LAKE STREET
CHICAGO 44, ILLINOIS

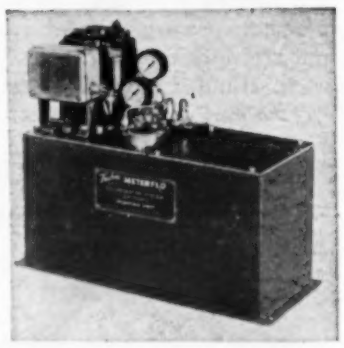
For more details circle NED-536 E3 on enclosed inquiry slip

FOG TYPE LUBRICATOR
cools as it oils rotating parts

Extremely fine and uniform oil fog is produced at low air flow by the Micro-Fog lubricator for bearings, spindles, gear boxes and small air powered devices. Features include constant oil level to assure uniform rate of oil feed, 360-degree visibility of oil flow, accurate metering of oil delivery into air line to as little as 1 drop in 20 minutes and universal right-to-left or left-to-right flow without adjustment. High speed rotating parts are actually cooled as they are lubricated. Made for ¼-in. air line, unit requires air from 0.8-cfm at 10 psi to 6 cfm at 80 psi. Safe operating pressure is 150 psi; temperature, 120° F. Made by **C. A. Norgren Co.**, 3405 S. Elati St., Englewood, Colo.

For more details circle NED-537 E3 on enclosed inquiry slip

OIL CIRCULATING SYSTEM
flow rates up to 80 cu in./minute



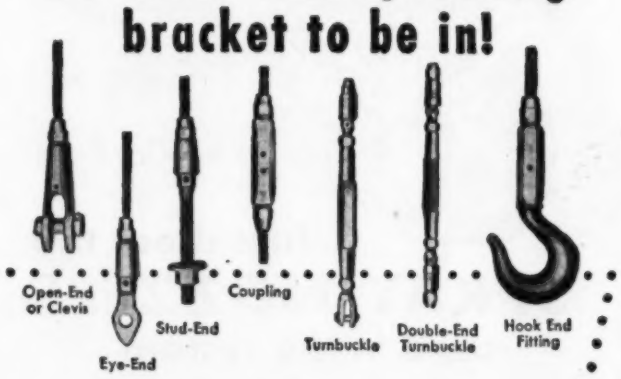
Utilizing a positive piston displacement principle, Meterflo oil circulating system features flow rates up to 80 cu in. per minute. Series RTP-2000 rotary type pump units are available in complete range of discharge capacities and include optional sump unit, motor, pump, high-low dual-acting pressure switch, cartridge type filter, pressure gages, oil level gage and fill screen. Type MXO and MO metering valves control flow of oil to each bearing in system. Switch, connected to warning lights, allows identification of excessively high or low pressure, blocked line, low oil supply, or will shut down machine being lubricated. Signal lights actuated by oil flow are optional. Made by **Trabon Engineering Corp.**, Dept. A, 1814 E. 40th St., Cleveland 3, O.

For more details circle NED-538 E3 on enclosed inquiry slip

DO YOU KNOW? A new mercury-reactor attachment for automobile wheels is reported to eliminate the need for balancing weights. Mercury-loaded disks fit over regular wheel lugs. As wheel rotates, counter-centrifugal force builds up to cancel out any unbalance tending to build up in complete wheel assembly. Disks developed by Oswego Products Corp., Oswego, N. Y.

For more details circle NED-539 E3 on enclosed inquiry slip

An ideal money-saving bracket to be in!



- Electroline Wire Rope Fittings offer these important advantages:
- Installation time: only a few minutes . . . and by ordinary labor working with ordinary tools.
- Longer life for wire-rope by damping vibration stresses and overcoming rope fatigue at the entrance of the fitting . . . where rope-weakening often occurs.
- Cut re-roping costs . . . use these fittings over and over again.
- Electroline Wire Rope Fittings are safe, economical, permanent. Obviously, they're a good investment.

Get the whole story in our catalog—glad to send you one.

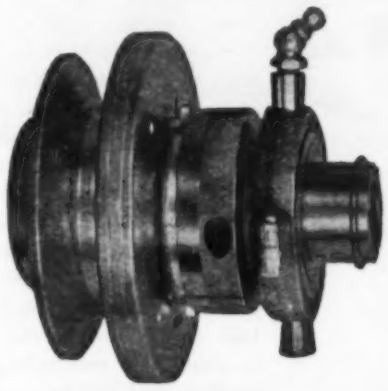
Electroline Company
4121 SOUTH LA SALLE STREET
CHICAGO 9, ILLINOIS
IN CANADA: POWERLITE DEVICES, LTD., TORONTO

For more details circle NED-540 E3 on enclosed inquiry slip

NEW DISC CLUTCH

for gasoline engines, electric motors, speed reducers, etc.

operates with light pressure
picks up load without grab



integral V-belt pulley
integral sprocket
cut-off coupling or sleeve
easy manual operation
adjustable
powerful

For stub or through shaft application, these new Type K clutches—rated up to .8 HP at 100 rpm—have generous safety factors throughout to stand severest service. Threaded steel adjuster permits precise easy adjustments to assure maximum capacity and minimum engaging pressure. Clutch locks itself in engaged position.

Write for new descriptive Bulletin K-1, including complete specifications.

THE EDGEMONT MACHINE CO.
2200 HOME AVENUE • DAYTON 1, OHIO

For more details circle NED-541 E3 on enclosed inquiry slip

Chicago MOUNTED Wheels

...now even better with 79E BOND

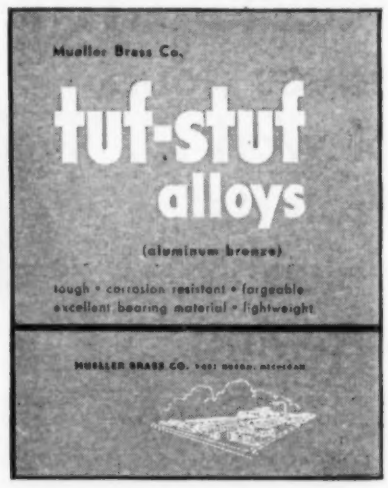
Buy Chicago Mounted Wheels—bonded with 79E Bond—and you'll never use any other!

79E—a tough new bond exclusive with Chicago Wheel—is the sensation of the industry . . . it does a BETTER grinding, burring, and finishing job FASTER. A size and shape for every use. Deliveries are excellent—Order today.

CHICAGO WHEEL & Mfg. Co.
Dept. NED • 1101 West Monroe Street, Chicago 7

For more details circle NED-542 E3 on enclosed inquiry slip

90-A



This new engineering manual of facts on MUELLER BRASS CO. TUF-STUFF® ALUMINUM BRONZE ALLOYS is ready.

Write for your copy today

MUELLER BRASS CO. • PORT HURON 27, MICH.

For more details circle NED-543 E3 on enclosed inquiry slip

GENUINE — SIMPLE

SILVER PLATING

"ON THE JOB" WITH POWDER

Purposes of silver plating need not be explained to you of the electrical field.

The biggest problems of silver plating are its convenience, economy and thoroughness. "Cool - Amp" silver plating POWDER is the answer to these problems.

"Cool-Amp" deposits a genuine coat of silver that will not peel off and provides cool maximum conductivity for copper, brass or bronze contacts. It has been proven equal to any electroplating for bolted and stationary contacts and is far more adaptable . . . always ready for use.

"Cool-Amp" POWDER offers a quick and easy solution to heating due to oxidation, improves the continuity of electrical service and reduces maintenance.

"Cool-Amp" is completely harmless to the user and is simple to apply. It can be used by any number of people at the same time. ON THE JOB, in underground vaults and sub stations and in hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

Dampen a rag, dip in "Cool-Amp" and rub on surface. One pound will silver plate approximately 6000 square inches.

$13.50 PER POUND SHIPPED PRE-PAID

WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

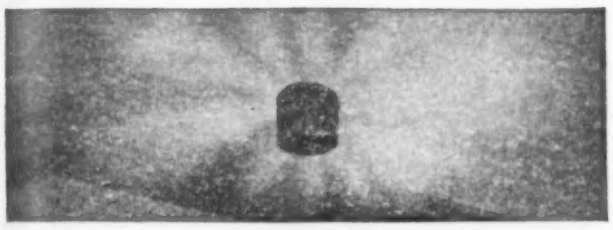
GENUINE • SIMPLE SILVER PLATING

COOL-AMP

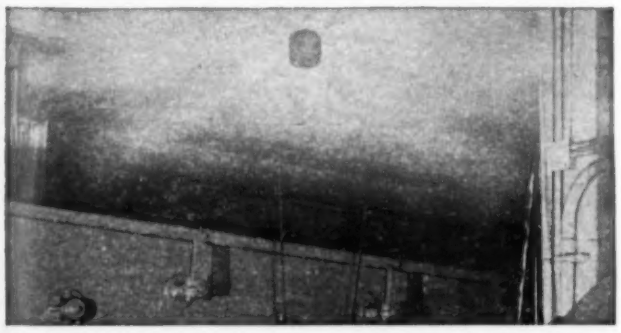
Dept. ED 8603 S. W. 17th Avenue • Portland 19, Oregon

▲ For more details circle NED-544 E3 on enclosed inquiry slip ▲

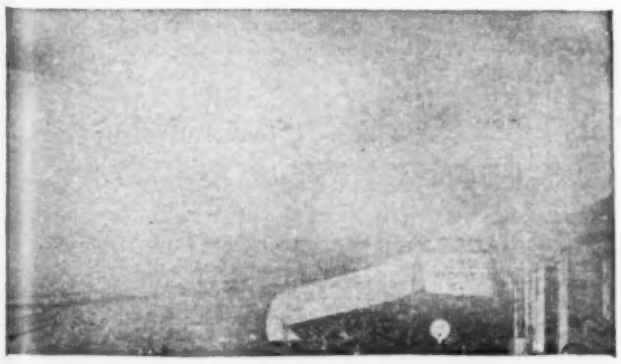
INSECTICIDE FOG COSTS 5¢ FOR 1,000 cu.ft.



1 second — 10 precision machined suction nozzles on West Atomizer suspended from ceiling start filling the air with deadly "dry mist". Only 1 ounce of Vaposector needed to control flying insects; 2 ounces for crawling insects in 1,000 cu. ft.

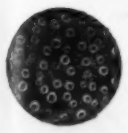


2 seconds — Fog droplets are so small they hang in the air . . . seep into cracks . . . penetrate delicate insect breathing tubes. The combination of efficient West Atomizing equipment and high potency insecticide produces thorough insect protection at a remarkably low cost.



3 seconds — Insects have no place to hide. One man has completely fogged this area and all other plant areas by merely turning a valve. This Insect Control Program was set up by a West Specialist. Your plant can be surveyed too. Without obligation. There's a complete line of West insecticides and equipment — permanent or portable — to choose from. Just write in.

➡FREE BOOKLET available on request.



Magnified photo of uniform 8 micron droplets produced by West Atomizer equipment. "Dry mist" remains airborne for prolonged periods of time.

Photo of droplets produced by ordinary hydraulic compressor sprayers. Vary from 2 to 300 microns. Larger droplets fall, wetting floors and cutting effectiveness.

WEST DISINFECTING COMPANY

42-16 West Street • Long Island City 1, N. Y.

▲ For more details circle NED-545 E3 on enclosed inquiry slip ▲

DRILLING MACHINE
has power, hand or hydraulic feeds

Holes up to 1¼ in. diameter in steel and 1½ in. in cast iron can be drilled by the No. 3 MVB heavy duty drilling machine. It has a 24-in. swing, No. 3 or 4 Morse taper and from one to four spindles. Power, hand or hydraulic feeds are available, the first mentioned with three feed rates, adjustable depth stop and safety slip clutch. Hydraulic feed has either plain or step-by-step controls. A four-speed motor with back gears provides eight standard speeds, but a single-speed motor with or without back gears or a four-speed motor without back gears can be furnished. Made by **Leland-Gifford Co.**, Lincoln Highway, Worcester 1, Mass.

▲ For more details circle NED-546 E3 on enclosed inquiry slip ▲

PACKAGE TRUCK
sloping floor eliminates spillage

Designed with an open side for ease in loading and unloading, this package truck has a removable wood floor that slopes downward toward the opposite side to prevent spillage. The welded steel truck has a 4-in. swivel caster on each end and two 5-in. rigid casters in the center or four 4-in. swivel casters on each corner. Standard models range in inside dimensions from 27 x 53 in. to 36 x 60 in. and height above casters on all models is 60 in. Special models built to specification are available, and like the standard models, can have an intermediate shelf. Made by **Leebaw Mfg. Co.**, Dept. A, 65 Wayne St., Youngstown 2, O.

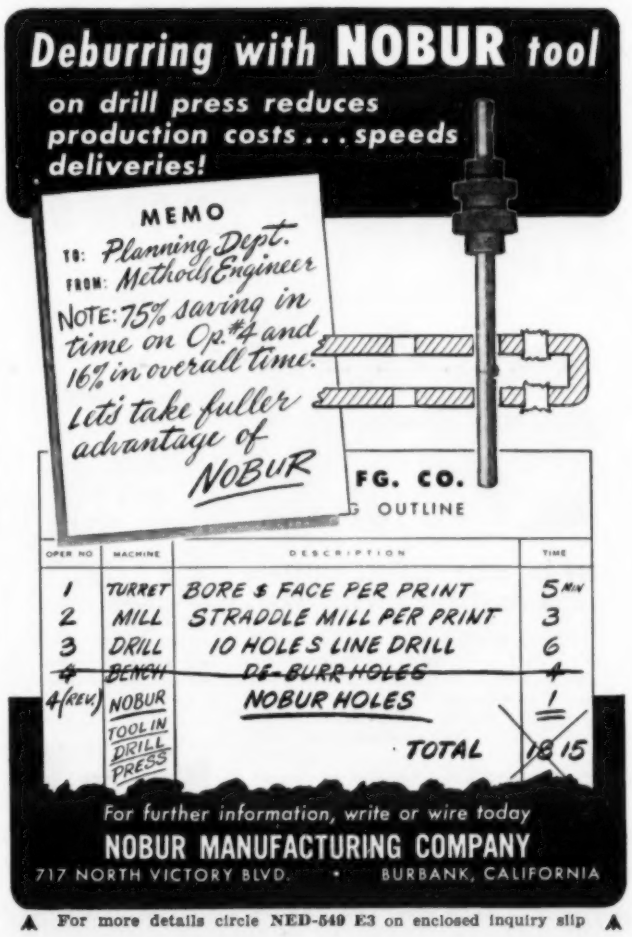
▲ For more details circle NED-547 E3 on enclosed inquiry slip ▲

DO YOU KNOW? Expansion of facilities has led this company to offer a service for the contract compounding and packaging of liquids, creams and pastes to exact formulations. Service embraces the filling of bottles, tubes or cans in sizes from 1/6-oz to 1 gal. Compounding facilities cover steam-jacketed kettles, agitators, colloid mills, labeling equipment, filters and assembly of kits. Service offered by Carbona Products Co., 30-50 Greenpoint Ave., Long Island City 1, N. Y.

▲ For more details circle NED-548 E3 on enclosed inquiry slip ▲

Deburring with NOBUR tool

on drill press reduces production costs . . . speeds deliveries!



For further information, write or wire today

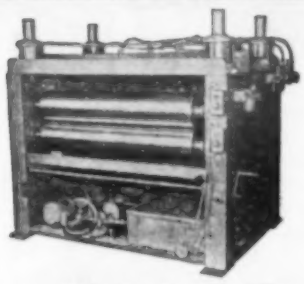
NOBUR MANUFACTURING COMPANY

717 NORTH VICTORY BLVD. • BURBANK, CALIFORNIA

▲ For more details circle NED-549 E3 on enclosed inquiry slip ▲

UNION AUTOMATIC COMPOUND SPREADERS

SAVE *8 WAYS



1 "Die life increased 75%."
2 "Production increased 20%."
3 "Compound saving of 16%."
4 "Rejects reduced 10%."
5 "One helper eliminated."
6 "Paid for itself in 54 days."
7 "Able to use salvage stock for some operations."
8 "25,000 more pieces before changing dies."

MODELS TO FIT ANY STOCK UP TO 96" WIDTH

Union is the foremost designer and manufacturer of roller coating machines for application of drawing or stamping compounds and protective coatings.

Models may be equipped with hardened steel, or with neoprene-covered rolls—also with heated or cooled rolls—to meet your individual requirements.

*The above claims are based on actual statements by users, both large and small—a number of whom have ordered a second and third machine.

Complete data and agent's name on request. Union will design and/or manufacture coating machines to meet your specific requirements.

UNION TOOL CORP.

318 E. MARKET ST., WARSAW, IND., U.S.A.

USERS SAY UNION CUTS COSTS, SPEEDS PRODUCTION

▲ For more details circle NED-550 E3 on enclosed inquiry slip ▲

LAWLOR MOP WRINGERS

FOR EASIER MOPPING GET A LAWLOR NO. 2

Copied but never Duplicated!

EASIEST turning wringer made: there are bearings at ends of rollers.

EASY to bring rolls together: foot lever is perfectly balanced.

EASY to move wringer: self-adjusting front casters raise metal feet from floor when you're ready to go.

The LAWLOR No. 2 accommodates any standard round, galvanized pail up to 16-quart capacity. Net weight of wringer—23 pounds.

LAWLOR No. 6 TWIN is like the No. 2 Wringer in general construction, but accommodates two pails.

Write for Catalog of Mop Wringers, Tanks, Cleaning Equipment for every kind and size floor.

S. C. LAWLOR CO.

Quality Floor Equipment for 50 Years

131 N. ABERDEEN ST. CHICAGO 7, ILL.

▲ For more details circle NED-551 E3 on enclosed inquiry slip ▲

Here is Power at the Speed You Need

Write today for your copy of this NEW 20-page catalog on SHAFT-KING, the NEW Shaft-Mounted Speed Reducer.

It will pay you to get complete information about SHAFT-KING before you buy any speed reducer. It outperforms all others in its size range. It's made by American, the originator of shaft-mounted speed reducers.

The American Pulley Company
4294 Wissahickon Ave., Philadelphia 29, Pa.
Gentlemen:
☐ Please send your new Shaft-King Catalog
☐ Send name of local Shaft-King distributor
☐ We need help on a slow speed drive problem
Name_____
Firm_____
Address_____
City_____ Zone____ State_____

▲ For more details circle NED-552 E3 on enclosed inquiry slip ▲

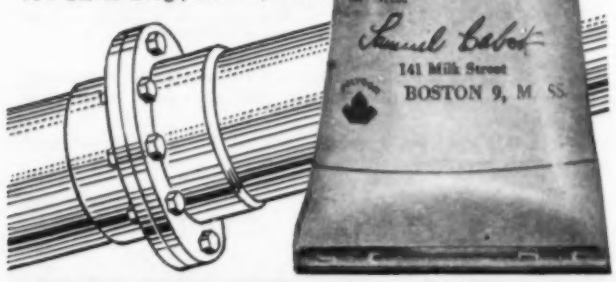
PLASGON
SEALS leaky pipe joints

Plasgon is an all-purpose plastic cement that not only seals pipe joints, radiator connections, etc. but stays flexible, absorbs jars and shocks. Unaffected by steam, water, oil, gasoline, glycol . . . resists heat up to 350° F. and withstands considerable pressure.

Keep a tube of *Plasgon* in every mechanic's tool kit and in the shop. Comes in black or white.

Write for Large Free Sample Tube of Plasgon to try on the job.

SAMUEL CABOT INC.
532 Oliver Bldg., Boston, Mass.



▲ For more details circle **NED-553 E3** on enclosed inquiry slip ▲

SPARE THE MUSCLES!
LET "George" HAUL TOTE BOXES

This cleverly designed, easy-rolling hand truck supplies the leverage that "goes to bat" for employee muscles. Attached rigid handle hook is engaged with tote box handle. With little effort and by natural leverage, the box glides over bevel edge of truck onto rollers when truck handle is pulled forward. Load is safely held on upper rollers while truck is rolled to destination on lower set of traction rollers.

No dangerous lifting of metal-laden boxes . . . long life . . . low cost. Most plants can use several . . . one company bought 150 units. Get yours!

*TRADEMARK

LET "George" DO IT
4RG53

Send for Bulletin N
ROLOCK Inc. • Fairfield, Conn.

▲ For more details circle **NED-554 E3** on enclosed inquiry slip ▲

You get ALL these features when you buy PET DRILLS!

If you want the best, take an extra look at the PET Superduty Drill above! Here's a continuous-duty drill—built to *work* right and *handle* right.

And, the price is right, too! All features shown are *standard* in PET Superduty Drills—at a *standard drill price!* Complete line of 54 ¼", ⅜" and ½" models gives you wide selection—in pistol or saw-type grip. Use coupon below to get complete facts!

PORTABLE ELECTRIC TOOLS, INC., 320 W. 83rd St., Dept. ND53, Chicago
In Canada: Portable Electric Tools, Ltd., 452 Birchmount Rd., Toronto

MAIL COUPON FOR FREE BULLETIN

Please send me free PET Superduty Catalog and name of nearest distributor.

Name_____ Title_____
Company_____
Address_____
City_____ State_____

▲ For more details circle **NED-555 E3** on enclosed inquiry slip ▲

STEEL PLATE SEPARATOR
fans out plate ends for handling

Handling of greased steel plates in the laminating stage of transformer manufacture is facilitated by this magnetic type plate separator. Placed at the assembly station, separator raises lamination plates equidistantly allowing operator to grasp one at a time with ease. Separator induces a magnetic field in the stacked steel laminations causing individual plates to repel each other. Ends of the plates fan out with enough air space between to allow fingers to grasp one or more of them. Made by **Basco Mfg. Co.**, 5-NED Woodside St., Stamford, Conn.

▲ For more details circle **NED-556 E3** on enclosed inquiry slip ▲

CAPACITOR
has molded cap construction

Molded capacitor cap construction is featured in UMP twist-prong series of capacitors. New manufacturing method improves sealing and capacitor performance, making it immune to damage caused by shock and vibration. Construction features molded-in terminals, separation of capacitor body and terminals and brings about elimination of seepage and corrosion. Capacitors are available in wide range of voltages and capacities. Made by **Illinois Condenser Co.**, Dept. A, 1616 N. Throop St., Chicago 22, Ill.

▲ For more details circle **NED-557 E3** on enclosed inquiry slip ▲

WOOD SHAPING MACHINE
features high speed knives

Added to line of woodworking machinery is this 752 wood shaper which features high speed knives and large 20 x 20-in. table with an adjustable guide fence. Machine has life sealed ball bearings, weighs 155 lb with motor and stands 36 in. high. All moving parts are covered for maximum safety. Made by **St. Paul Foundry & Mfg. Co.**, Heston & Anderson Div., 607 Kirkwood Ave., Fairfield, Iowa.

▲ For more details circle **NED-558 E3** on enclosed inquiry slip ▲

FORT WORTH QD Roller Chain **SPROCKETS** WITH TAPERED SPLIT HUB

PATENT APPLIED FOR

ELIMINATE REBORING!

SAME HUB FITS "QD" V-BELT SHEAVE

Speed changes are simplified and "spare" sprockets can be carried more easily.

If your favorite distributor doesn't stock this new item, tell him about it. He'll reward you with better service.

"OFF THE SHELF" SERVICE AVAILABLE FROM INDUSTRIAL DISTRIBUTORS

Reboring of stock bore sprockets to fit various shafts is eliminated due to the various bores available in the QD hub. Installation and removal from the shaft is made easy by the tapered fit of the hub and sprocket. Hub assembly grips the shaft equivalent to a "press fit."

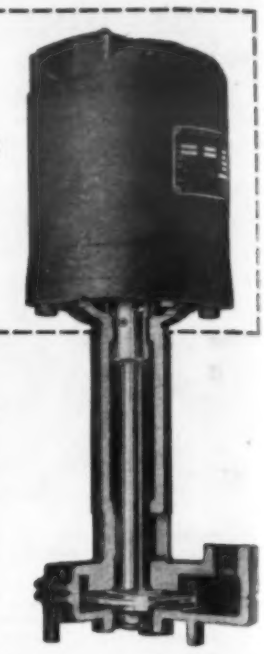
Catalog explaining additional advantages and construction details will be furnished on request.

OTHER FORT WORTH PRODUCTS
V-BELT DRIVES
SCREW CONVEYORS and ACCESSORIES
SCREW ELEVATORS
INDUSTRIAL FANS

FORT WORTH STEEL AND MACHINERY CO.
Dept. 225, 3600 McCart, Ft. Worth, Tex.

▲ For more details circle **NED-559 E3** on enclosed inquiry slip ▲

Motor-Driven Centrifugal Pumps That Dirt Can't Hurt!



Here's a complete line of ten different Motor-Driven Centrifugal Pumps that are completely protected from damage by dirt or abrasives. Hydraulically balanced, their design eliminates metal-to-metal contact below water level. Motors are of standard NEMA design, for easy replacement, and totally enclosed against dust or vapor.

You'll find that the design simplicity and sound construction of these Brown & Sharpe Pumps make them ideal for countless applications where grit or foreign substances may be present. Write for Pump Catalog. Brown & Sharpe Mfg. Co., Providence 1, R. I., U.S.A.

BUY THROUGH YOUR LOCAL DISTRIBUTOR

Brown & Sharpe B&S

▲ For more details circle **NED-560 E3** on enclosed inquiry slip ▲

JIG GRINDING ACCURACY *guaranteed**

INFINITE CONTROLLED SPEEDS 30,000 TO 65,000 R. P. M.

Easily connect jig grinder to jig borer or mill

Then you can finish grind in hardened steel to "tenths" . . . jig grind dowel holes square with a ground base . . . move location of holes in hardened steel blocks . . . jig grind interchangeable holes in hardened sections . . . grind small holes with diamond impregnated mandrels . . . grind contours and relief with tungsten carbide burrs . . . grind radii in die sections . . . eliminate jig bushings in tools where close spacing is essential.

Other infinitely controlled air driven spindle applications

Place spindle on most any machine. Use it for finishing contours on hardened steel working surfaces . . . burring or milling die castings . . . routing wood contours . . . carbide milling or finishing slots . . . finishing holes in hardened steel to "tenths" . . . grinding with diamond wheels, carbide burrs, or diamond impregnated mandrels.

Advantages—10 micro finishes using carbide mills . . . 6 micro finishes using mounted points, operates at any angle . . . air driven, air cooled, overheating prevented . . . speed controlled at optimum point . . . 3 5/16" long motor uses little working space . . . By controlling speed at any point you abolish need for many constant speed spindles.

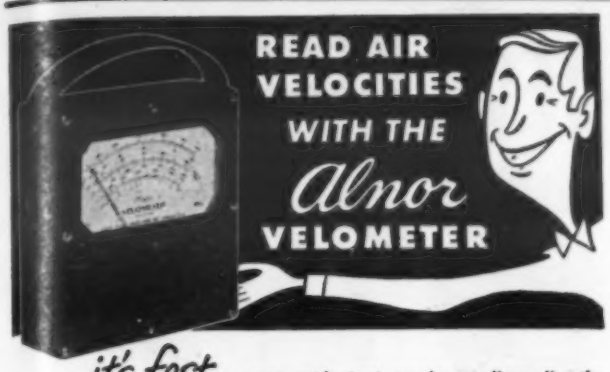
For immediate quotation please state machine tool application. Get this manual of photos showing operations Vulcanaire performs.

*Dependably accurate to "tenths"

Vulcanaire
BUILT BY TOOLMAKERS FOR TOOLMAKERS

VULCAN TOOL CO., 737 LORAIN AVE. DAYTON 10, OHIO

▲ For more details circle **NED-561 E3** on enclosed inquiry slip ▲



it's fast . . . you get instant, precise readings directly from scale face . . . no need for reference charts or calculations. Measure air flow through ducts, grilles, motors, spray booths, etc., or in the open.

it's accurate . . . brings laboratory standards of air velocity measurement to the production line, mine, mill . . . anywhere. Needs no special care or handling . . . anyone can use it and get accurate results.

it's portable . . . completely self-contained, hand-held. Rugged construction and sturdy case protect the Velometer from usual hazards of portable use. Available in scale ranges to 24,000 f.p.m. Wide selection of jets and fittings assures adaptability of Alnor Velometer to your application. Get full details and prices, write for Bulletin 2448-G. Illinois Testing Laboratories, Inc., Rm. 529, 420 N. La Salle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

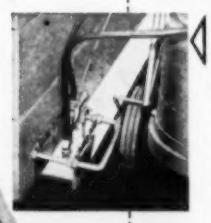
For more details circle NED-562 E3 on enclosed inquiry slip

For more details circle NED-563 E3 on enclosed inquiry slip

Striping is easy

GRAVITY MARKER A low cost model for marking aisles, loading zones, parking lots. Paints sharp, clear lines 2", 3" or 4" wide on any surface. Protects employees from danger.

ECONO-LINER spray paints continuous or skip lines 2" to 6" wide. Adjustable, free-floating paint guides follow contour of any surface. Converts to a portable spray rig for painting.



Paints lines within ⅛" of fixed objects or stacked cartons.
Paints sharp, clear lines on concrete, wood block, black top, brick or any surface.

For more details circle NED-564 E3 on enclosed inquiry slip

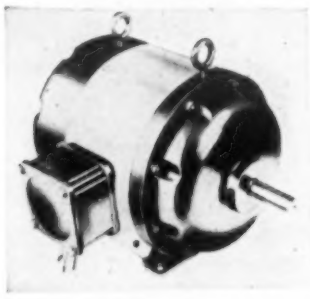
WET BLASTING MACHINE cleans and finishes small parts with fine mesh abrasives

Precision cleaning and finishing operations involving small pieces that can be lifted and handled manually can be carried out in the model 30 Liquamatte wet blasting machine. It has a blasting compartment measuring 30 in. square and 2 ft 7 in. high. A 15-in. diameter rotating work table and small portable auxiliary rinsing tanks are available.

Fine mesh abrasives, suspended in water, are propelled to the work by compressed air. They do not destroy sharp corners, lines or lettering in patterns. Tolerances of 0.0001-in. can be maintained. Set of armholes with gauntlets allows the operator to manipulate the abrasive gun toward the work with his hands while operating the air valve with his knee. Work is illuminated with fluorescent lights and viewed through a large window. Made by **American Wheelabrator & Equipment Corp.**, 1128 S. Byrkit St., Mishawaka, Ind.

For more details circle NED-565 E3 on enclosed inquiry slip

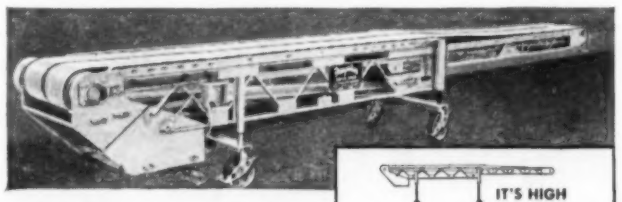
CHEMICAL PLANT MOTORS in ratings from 1 to 40 hp are totally-enclosed and explosionproof



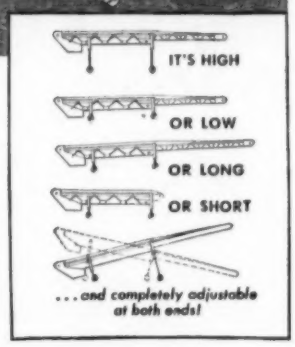
Line of chemical plant motors in ratings from 1 to 40 hp and in NEMA frames up to 405 are now available in totally-enclosed and UL-approved explosionproof construction. Class A chemical insulation treatments allow use of motors in applications involving acids, alkalies, peroxide dyeing and bleaching, canning and packing. Cast bronze, aluminum or iron ventilating fans and cast bronze, iron, stainless or flattened expanded metal ventilating grilles may be specified.

Automatic drain-and-breather plugs, as well as stainless shafts are available. All frames have stainless steel outer shells. Steel parts are protected by corrosion-resistant coating and paint, and die-cast rotor is sprayed with inhibitor. Repellent grease at shaft extension hub keeps moisture away from double-row, prelubricated, sealed bearings. Made by **Robbins & Myers, Inc.**, Industrial Motor Div., 1300 Lagonda Ave., Springfield 99, O.

For more details circle NED-566 E3 on enclosed inquiry slip



Where can *you* use this new FARQUHAR *EXPAND-O-VEYOR*?
Completely adjustable in height and length!



Use this new Farquhar *Expand-O*-Veyor at maximum length and height settings one day . . . at minimum settings, the next day. Or, operate it at any combination of height and length positions you desire. Perfect for loading and unloading trucks—can be shortened or expanded as the truck becomes loaded or emptied. Get more information about this new *Expand-O*-Veyor's versatility today. Write to the address shown below, telling us what you move. There's no obligation, of course.

OLIVER Farquhar CONVEYORS

FREE! "Owners Report"—a booklet of case histories describing money-saving Farquhar conveyor installations. Write: The OLIVER Corporation A. B. Farquhar Division Conveyor Dept. Y-04, York, Penna.

POWER-BELT & GRAVITY CONVEYORS

For more details circle NED-567 E3 on enclosed inquiry slip

Floors have to take a beating?

GET TUFF-TEX*!

Heavy traffic and machining areas, testing labs, plant eating places . . . *need* Tuff-Tex *Greaseproof* Industrial Tile!

Tuff-Tex is the ideal flooring for resisting impact . . . fire . . . metal chips . . . constant rolling friction . . . cutting oils and lubricants . . . greasy foods.

It's *good-looking*, too! Comes in a wide range of rich, permanent colors. Offers versatility of design . . . both functional and decorative.

Send today for folder, "Tuff-Tex *Greaseproof* Industrial Tile" . . . or see your Tile-Tex* Contractor, listed in classified pages of phone book. Ask him about Flexachrome*, too.

• • •

THE TILE-TEX DIVISION, The Flintkote Company, 1234 McKinley Street, Chicago Heights, Illinois

Tile-Tex—Pioneer Division, The Flintkote Company, P. O. Box 2218 Terminal Annex, Los Angeles, 54, California

The Flintkote Company of Canada, Ltd., 30th Street, Long Branch, Toronto, Canada

*Registered Trademark, The Flintkote Company

TUFF-TEX GREASEPROOF INDUSTRIAL TILE

For more details circle NED-568 E3 on enclosed inquiry slip

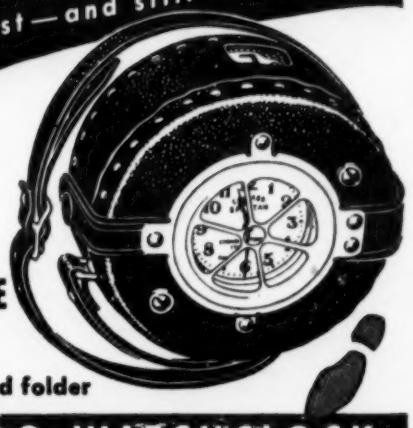
In the silence of the night

the watchman makes *his* rounds while the hands on his CHICAGO Watchclock make *their* rounds.

In the morning, there is a permanent dial-record of exactly where the watchman was during each hour . . . in the silence of the night.

The tamperproof CHICAGO Watchclock system is approved by both THE UNDERWRITERS' LABORATORIES and by THE FACTORY MUTUAL'S LABORATORIES. It gives extra protection against fire, theft and sabotage.

CHICAGO WATCHCLOCK
The first—and still the first



Quickly pays for itself... REDUCES INSURANCE RATES

Send for illustrated folder

CHICAGO WATCHCLOCK
DIV. GREAT LAKES INDUSTRIES, INC.
1522 S. WABASH AVE., CHICAGO 5, ILL.
OFFICES IN PRINCIPAL CITIES

For more details circle NED-569 E3 on enclosed inquiry slip

If you use bin-stored materials you can handle them better with a Simplicity Os-A-Veyor type bin feeder

If you move anything that can be stored in a bin, chances are a Simplicity Os-A-Veyor type bin feeder will cut handling costs and speed up your operations. Simplicity Bin Feeders practically eliminate bridging and stoppage because they feed from the full length of the bin—materials will flow as you need them. Simplicity bin feeders are ideal, too, for storing and moving materials that are improved by tempering. Simplified power and operating mechanism keeps maintenance costs low, makes servicing easy. Write us today for complete information.

Simplicity ENGINEERING CO., DURAND, MICH. 101

For more details circle **NED-570 E3** on enclosed inquiry slip

Fast Motor Service

Factory approved motor service in every industrial area from 97 Allis-Chalmers Certified Service Shops

ALLIS-CHALMERS CERTIFIED SERVICE SHOPS are independent service shops which meet rigid standards for ability, experience, equipment and business integrity. They use factory approved methods and parts and do your work promptly at a fair price.

Of course, Allis-Chalmers Certified Service Shops give good service on any electrical equipment, of any make. To find the Certified Service Shops in your area, call your nearby Allis-Chalmers District Office or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-3867

ALLIS-CHALMERS

For more details circle **NED-571 E3** on enclosed inquiry slip

BREEZE Job-Engineered BELLOWS

ANOTHER BREEZE MARK PRODUCT

...Give LASTING PROTECTION Where Ordinary Bellows Fail

Breeze welded diaphragm bellows meet the operating life cycle of any equipment in which they are used *because every Breeze bellows design is individually engineered and built for the job.*

Breeze has no "stock bellows," but if you have a vibration problem in ducts, large or small, or want permanently sealed valve enclosures in any type of piping system, or need bellows for torque transmission or other uses, Breeze experience can quickly provide the answer . . . and production can meet your requirements.

A Breeze bellows is dependable because each diaphragm is designed to work well within its elastic limit. This is accomplished by thorough analysis of each application and careful design of the bellows to withstand all requirements. "Job engineering" each individual type eliminates makeshifts, assures efficient performance.

Breeze bellows are made in stainless steel, inconel, monel, nickel, steel, or other weldable alloys.

Feel free to consult us without obligation on your existing bellows requirements, or any other project where reliable welded diaphragm type bellows might solve a design problem.

BREEZE CORPORATIONS, INC. 41-S. Sixth St., Newark 17, N.J.

OTHER BREEZE PRODUCTS: ACTUATORS · RADIO SHIELDING · AERO-SEAL HOSE CLAMPS

For more details circle **NED-572 E3** on enclosed inquiry slip

STAIR-CLIMBING HAND TRUCK with both steel and aluminum frames

Ascension and descension of stairs, curbs and multilevel passageways with E-Z Climb two wheel utility hand truck is facilitated by two aluminum rocker shoes which, like extra wheels, support load until wheels reach next level. Cycle is repeated for each step or level and is the same for both up or down travel. Trucks are made with both steel and aluminum frames in variety of wheel diameters featuring both semipneumatic and pneumatic tires. E-Z Climb feature adds only 4 lb to truck's weight. Made by **Automatic Bending Co.,** 403 E. 159th St., Harvey, Ill.

For more details circle **NED-573 E3** on enclosed inquiry slip

AUTOMATIC COUPLERS for lift trucks and tractors

Standard towing eyes can be replaced with one of three types of automatic couplers available as optional equipment for Towmotor lift trucks and tractors. Each type is built with an open jaw which automatically makes the connection when entered by the trailer coupler. One type provides a hand-operated release lever, another has a foot lever, while the third permits operation of the release mechanism either manually or by foot pressure. Two are spring-actuated and the other has a ball type lock. Made by **Towmotor Corp.,** 1219 E. 152nd St., Cleveland 10, O.

For more details circle **NED-574 E3** on enclosed inquiry slip

DO YOU KNOW? The French Ugine-Sejournet Process for the hot extrusion of metals, involving a 2500-ton hydraulic press and related facilities, is now being employed in this country to produce tubes and shapes of tough stainless steel. Press will produce seamless tubing from 1½ to 6¼ in. OD. Shapes that cannot be rolled because of their unbalanced design can be extruded by this process. Service offered by United States Steel Corp., National Tube Div., Gary, Ind.

For more details circle **NED-575 E3** on enclosed inquiry slip

Where to use INSUL-MASTIC Coatings

These *Superior* coatings can end many problems in your plant for many years to come.

- They prevent corrosion from moisture, acids and other chemicals!
- They control condensation or sweating!
- They insulate!
- They stop walls and roofs from leaking!
- They keep insulation dry and protected!
- They deaden sound!
- They attractively resurface old buildings!

A 44-page catalog will give you more ideas for employing INSUL-MASTIC *Superior* coatings. Write for it today.

Insul-Mastic CORPORATION OF AMERICA
Oliver Building • Pittsburgh 22, Pa.
Representatives in Principal Cities

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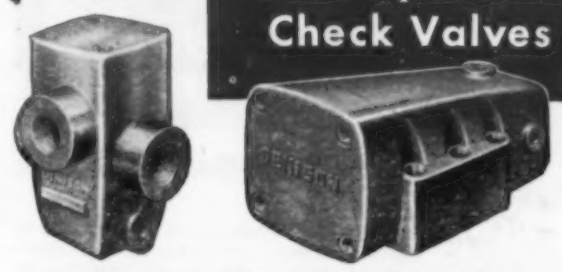
NEW DENISON Pilot Operated Check Valves



4 models, ½" to 1½" sizes . . . 3000 psi maximum, Standard Subplate or Threaded Body Types

"The Finest Money Can Buy!"

Another milestone in Denison's continuing research in oil-hydraulic equipment! New pilot-operated HydrOILic Check Valves, compactly built for circuits operating at pressures to 3000 psi. Improved, simplified design. Replaceable valve seats add to maintenance economy. Capacities to 50 gpm. ½", ¾", 1¼" and 1½" sizes. Standard subplate or threaded body types. Let us send you complete details on Denison HydrOILic Check Valves. . . Write today.

A COMPLETE LINE OF PUMPS, PUMPING UNITS, FLUID MOTORS, CONTROLS

DENISON HydrOILics

The **DENISON** Engineering Company
1151 Dublin Rd.
Columbus 16, Ohio

For more details circle **NED-577 E3** on enclosed inquiry slip

FOSTER Chrome Sleeve Quick Detachable COUPLERS AND HOSE FITTINGS

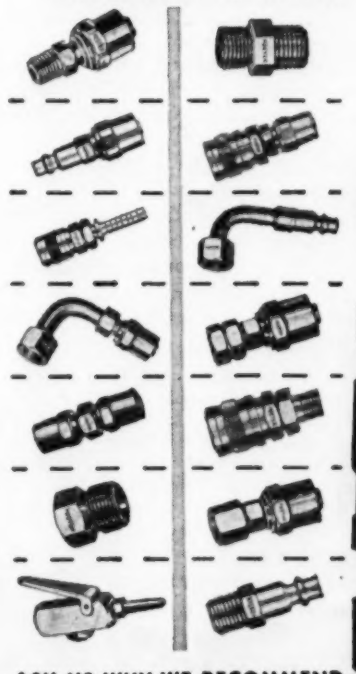
Price...Lower than most
Quality...None Better
Delivery...Immediate

- Reusable Socket Heads for Lower Replacement Cost!
- One Second Hookup Under Pressure!
- Tight-Seal, Dirt-Proof Construction! Leak-proof!
- Instant Automatic Flow! Swivel Action!

Foster Quick Detachable Couplers for pneumatic and hydraulic applications give longer service and cost less than other comparable couplers. Delivery of any order, large or small, is immediate. An order to Foster is faster. Write Dept. 2.

FOSTER MFG. COMPANY, INC.
2850 Gravois • St. Louis 18, Mo.

FOSTER FITTINGS ARE AVAILABLE THROUGHOUT THE NATION



Send for *Free* CATALOG

ASK US WHY WE RECOMMEND

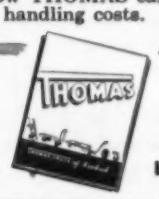
For more details circle **NED-578 E3** on enclosed inquiry slip

2-TON CAPACITY INDUSTRIAL TRAILER

FOR TRACTOR-TRAILER OPERATION

If you are looking for a rugged, easy-running trailer, the THOMAS "General" is the trailer for you. A choice of 5 platform sizes that can be "Job-Suited" with superstructures to carry your loads more efficiently and economically. Available with steel or rubber-tired wheels, with Hyatt roller bearings and automatic or manual couplers. Before you buy an Industrial Trailer find out how THOMAS can increase your production and lower your handling costs.

THOMAS TRUCK AND CASTER COMPANY
328 Mississippi River
KEOKUK, IOWA



Send for Free Literature

Visit our Booth 901, 5th Nat'l Materials Handling Expo., Phila., May 18-22.

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New! Marking Tools Catalog

Write for your copy today!

Now! A complete catalog of over a hundred Safety Marking Tools, concisely described for easy selection of just the right tool for every marking purpose. If you mark your parts or products, you can't afford to be without this new catalog. Request on your letterhead, please.

Mecco SAFETY MARKING TOOLS M.E.CUNNINGHAM CO.

1055 CHATEAU STREET, PITTSBURGH 33, PA.

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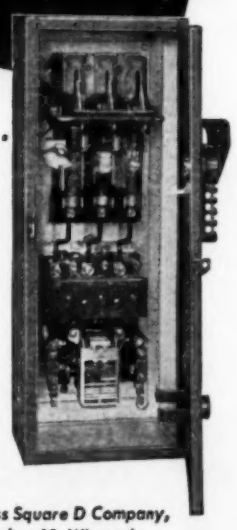
for GREATER SAFETY & LONGER STARTER LIFE

THIS SQUARE D COMBINATION STARTER...



• You save time and money when you install one device instead of two. You save mounting space, too. And you have a neater, more compact installation.

Square D's Switch gives you no less than eight design features which provide plus performance and operator safety.

Square D's Starter design provides quicker, easier maintenance and exceptionally long life.

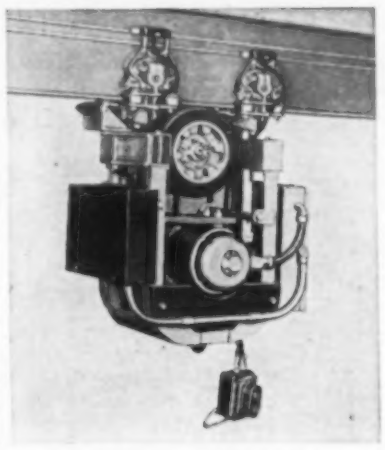
Write for Bulletin 8538. Address Square D Company, 4041 N. Richards Street, Milwaukee 12, Wisconsin

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

▲ For more details circle NED-581 E3 on enclosed inquiry slip ▲

MONORAIL DRIVE UNIT can propel up to 5-ton loads



Wide variation of control motor application, including fluid drive, adjustable spring loaded drive suspension and replaceable heavy duty 4 x 12 in. rubber drive wheel are advantages enabling this Mono-Tractor drive unit to meet heavy grade, speed and duty cycle requirements. Having extremely compact fabricated frame construction, unit will propel 5-ton loads. It can be applied for propulsion of electric hoist or other type carriers on MonoRail track having a smooth flange. Made by **American MonoRail Co.,** 13116 Athens Ave., Cleveland 7, O.

▲ For more details circle NED-582 E3 on enclosed inquiry slip ▲

LOW LIFT TRUCK for ramp use handles 6000-lb loads

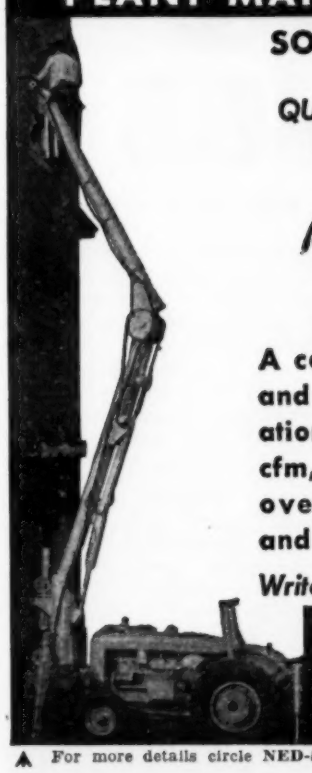
Capable of handling loads up to 6000 lb, the L-S Jacklift electric low lift walkie truck features short headroom, controlled speed on level floors and reserve power for ramp use. Motor is continuous rated at 1¼ hp with overload capacity of twice this figure. Fingertip control, which includes two speeds forward and reverse, are located in handle head. Controlling can be done with handle in any position, even vertical. Being compound-wound, motor minimizes difference in speed between empty and full-load operation. Truck is easy to service and has no under-truck adjustments. Bearings are permanently sealed and lubricated. Made by **Lewis-Shepard,** Dept. R-9, Watertown 72, Mass.

▲ For more details circle NED-583 E3 on enclosed inquiry slip ▲

DO YOU KNOW? Copper-base alloy stock ready for machining or other fabricating operations and made by a continuous-cast process is now available in diameters from 7/16 to 5⅛ in., in lengths up to 20 ft and made in rod, tubing and shapes with OD tolerances of 0.004 to −0.006-in. Available from American Smelting & Refining Co., Continuous-Cast Products Dept., Barber, N. J.

▲ For more details circle NED-584 E3 on enclosed inquiry slip ▲

SKYWORKER FOR PLANT MAINTENANCE



SOLVE OVERHEAD PROBLEMS QUICKLY, EASILY AND SAFELY with the SCHRAMM *Pneumatractor* equipped with SKYWORKER

A combination of height and reach, speed of operation, supply of air, 105 cfm, and efficiency, cut overhead on building and shop maintenance.

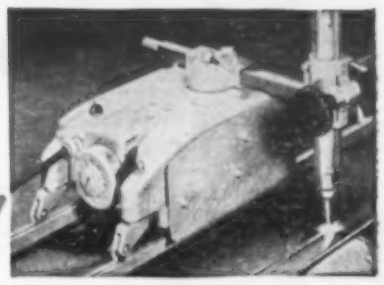
Write for Bulletin SK1-53

SCHRAMM, INC.
The Compressor People
WEST CHESTER, PA.

▲ For more details circle NED-585 E3 on enclosed inquiry slip ▲

SAVE TIME AND MONEY with this

OXWELD Trade-Mark MACHINE CARRIAGE



Here is a new lightweight machine carriage—the OXWELD CM-45—that will mechanize literally dozens of oxy-acetylene jobs in large or small metalworking shops, and do them better than the most skilled hands.

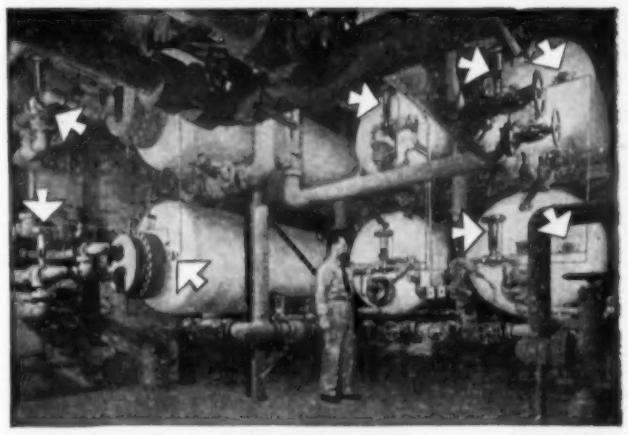
You save money when you let the CM-45 do your cutting, beveling, flame-treating, or special welding jobs. Its efficient operation saves oxygen and acetylene as well as time, and rejects are reduced to a minimum.

For further information, call your nearest LINDE representative today. Ask for a free copy of Form 7839. No obligation.

LINDE AIR PRODUCTS COMPANY
A Division of Union Carbide and Carbon Corporation
30 E. 42nd St., New York 17, N.Y. UCC Offices in Other Principal Cities
In Canada: Dominion Oxygen Company, Limited, Toronto

"Oxweld" is a trade-mark of Union Carbide and Carbon Corporation.

▲ For more details circle NED-586 E3 on enclosed inquiry slip ▲



Water Heaters Controlled by Powers Accritem Regulators

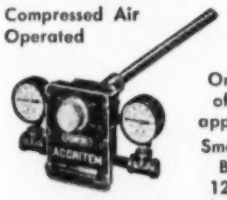
What's Your Water Temperature Control Problem?

POWERS ...with their many types of thermostatic regulators and 60 years experience is well qualified to help you find the right type of control for these applications:

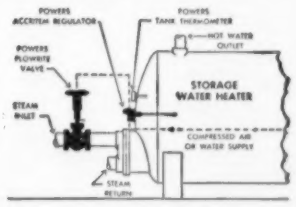
Forced Hot Water Heating Systems; various types of Water Heaters and Heat Exchangers; Jacket Water Cooling for Air Compressors, Diesel and Gas Engines also Cyclotrons, Chocolate Enrobers and Plastic forming Presses; all types of Shower Baths and Hospital Hydrotherapy; processing X-Ray, Regular and Colored Film — and hundreds of other uses.

Only one of Powers varied line of water temperature controls is shown here... the *Accritem Regulator.* It's compressed air operated, has calibrated dial temperature adjustment, adjustable sensitivity and many other features described in *Condensed Catalog 3035.*

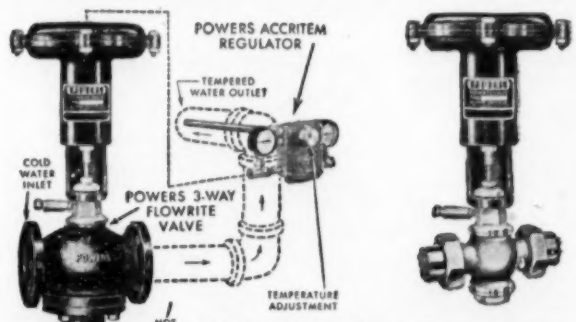
Compressed Air Operated



Only one of many applications Small Size. Bulb is 12" long



Powers Accritem Regulators Give Years Of Dependable Service



(a92)

ACCRITEM REGULATORS Control these POWERS FLOWRITE Diaphragm Valves which regulate temperature of heaters in photo above.

THE POWERS REGULATOR COMPANY
Skokie, Ill. • Offices in Over 50 Cities, see your phone book.
OVER 60 YEARS OF WATER TEMPERATURE CONTROL

▲ For more details circle NED-587 E3 on enclosed inquiry slip ▲

Tool Grinders by Ex-Cell-O

XLO

STYLE 44-A, Ex-Cell-O Precision Carbide Tool Grinder. A new model for sharpening single point tools. Inbuilt motor precision grinding spindle. Ample pressure coolant flow.

53-30

For Carbides, Cast Alloys, Hi-Speed Steels...

A complete line of grinders, for efficient and economical sharpening of single point tools. All are double-end models using cup type wheels; with large tool rest tables, easily adjusted.

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

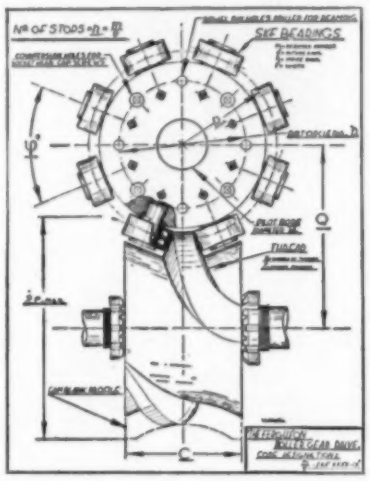
WRITE FOR THIS BULLETIN →

It shows and describes five models; also gives important data on tool grinding. Address Ex-Cell-O in Detroit today; ask for BULLETIN 46262.

For more details circle NED-588 E3 on enclosed inquiry slip

ROLLER GEAR DRIVE
indexing mechanism is standardized on units for intermittent motion

Standardized roller gear drives, intermittent motion or indexing mechanisms which replace Geneva drives, ratchet and crank mechanisms are now available for use in indexing dials, carriers, conveyors and similar equipment. Drives are made with 6, 8, 10 and 12 stops per revolution of output shaft and with indexing times of either ¼, ⅓, ½ or ¾ of total cycle time. They have been used on dial and roll feeds, carrier chains and conveyors at speeds up to 800 pieces per minute. Early custom-made units reportedly operated without maintenance for 8000 hours in cases where extreme precision was required and up to 20,000 hours where precision was not a factor. Made by **Ferguson Machine & Tool Co.**, Dept. 101, P. O. Box 191, Ferguson Sta., St. Louis 21, Mo.



For more details circle NED-590 E3 on enclosed inquiry slip

DYNAMOMETERS
packaged unit tests ac and dc motors

A self-regulating absorption unit and Quick Check torque scale which indicates directly in foot-pounds and horsepower are features of model 52 Tru-Tork packaged dynamometer for testing alternating and direct current electric motors. Self-regulating brake assures constant torque loading regardless of speed variations of motor under test. Switch-gear selects either single or three-phase power for motor under test, and meters indicate alternating current volts, amperes, watts and speed of motor while in operation. Welded steel cabinet has adjustable work table. Unit is rated 3 hp at 1800 rpm and has speed range extending to 4000 rpm. Made by **George L. Nankervis Co.**, 19253 W. Davison Ave., Detroit 23, Mich.

For more details circle NED-591 E3 on enclosed inquiry slip

World's Most Versatile Metal Saw

MARVEL No. 8, Capacity 18" x 18"

There is no other sawing machine like it. The work remains stationary. The blade is guided with a 90° twist and power fed vertically through the work. The saw blade and column can be instantly swung and clamped at any angle to 45° either right or left from vertical for miter cutting.

The number 8 MARVEL saw will handle the smallest, as well as the largest work up to 18" x 18". It will cut-off, trim, miter, notch, and split all bar stock, pipe, structural sections, moulding, tubing, or irregular shapes.

Write for our catalog, containing valuable information, enabling you to select a metal saw best suited to your work.

MARVEL Metal Cutting SAWS
Better Machines—Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

For more details circle NED-593 E3 on enclosed inquiry slip

LIKE AN ATOM-IC EXPLOSION

Just 1/32" (pinhole size) faucet leak
MUSHROOMS into ATOMIC WASTE
*of approximately 95,000 gallons**
of water yearly—costing:
$24.14
@ $1.90 per M cubic feet

If a hot water faucet, then actual FUEL WASTED heating 95,000 gallons costs approximately:
$88.91 if coal (9879 lbs.) †
$91.08 if oil (792 gals.) †
$84.41 if gas (84,411 cu. ft.) †

Above figures authenticated by Hackensack Water Co.* and American Gas Association.†

STOP this needless WASTE during today's MATERIAL and MANPOWER shortages with "SEXAUER" "Easy-Tites" that outwear ordinary faucet washers 6-to-1, thus SAVING labor on 5 REPEAT repairs, PLUS water and fuel, while prolonging the life of SCARCE fixtures.

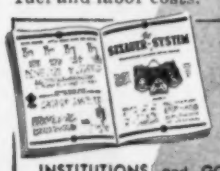
PAT'D.
"EASY-TITE" Faucet washers

...a modern laboratory triumph, are compounded from du PONT NEOPRENE (tested up to 300° F.) instead of rubber—to withstand DESTRUCTIVE HEAT common in present-day superheating water systems—that formerly broke down washer's structure.

Built like a tire with fabric re-inforcement

they resist the grinding, closing squeeze that SPLIT and MUSH ordinary washers out of shape...causing LEAKS.

Through combining NEOPRENE and FABRIC RE-INFORCEMENT they OUTWEAR ordinary washers 6-to-1 on hot or cold FAUCETS—thus you slash water, fuel and labor costs.



THE NEW 'SEXAUER' CATALOG,
Edition G, just out pictures over 2500 TRIPLE-WEAR plumbing REPAIR parts and Pat'd. Precision Tools. It's today's accepted buying guide for discriminating purchasing and maintenance personnel among thousands of top PLANTS, INSTITUTIONS and GOVERNMENT AGENCIES that rely on SEXAUER repair materials. *Send for your copy today!*

Then too, there's a SEXAUER TECHNICIAN within quick call from coast-to-coast, who offers a special SURVEY service that sets up a schedule of the exact replacement parts required for your particular plumbing fixture regardless of make or age and *without obligation.*

A postcard will bring him and your NEW Catalog promptly.
J. A. SEXAUER MFG. CO., INC., Dept. AU-53,
2503-05 Third Avenue, New York 51.

as advertised in THE SATURDAY EVENING POST

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-589 E3 on enclosed inquiry slip

WICKWIRE ROPE SLINGS

tough...strong...extra flexible

Wickwire Rope Slings are offered in both braided and conventional types . . . are designed to hitch on to heaviest loads with utmost safety, ease of handling and absolute security of attachments. Where extreme flexibility is required, Wickwire Slings of braided design give definite advantages in non-kinking qualities and in their ability to handle materials of all types and shapes without taking a permanent set.

Let us know your requirements. Our engineers will be pleased to analyze your sling problems and recommend the correct solution.

THE COLORADO FUEL AND IRON CORPORATION — Abilene (Tex.)
Denver • Houston • Odessa (Tex.) • Phoenix • Salt Lake City • Tulsa
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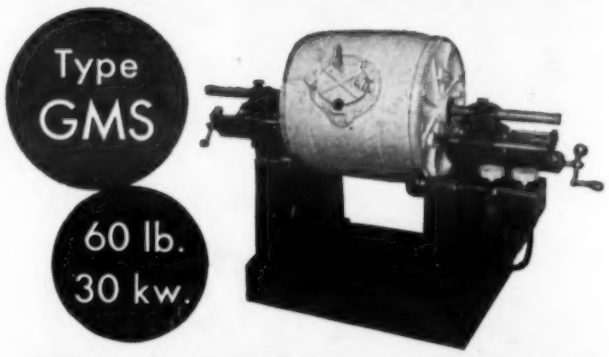
Oakland • Portland • San Francisco • Seattle • Spokane
WICKWIRE SPENCER STEEL DIVISION—Boston • Buffalo • Chattanooga
Chicago • Detroit • Emlenton (Pa.) • New York • Philadelphia

WICKWIRE ROPE
CF&I PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

For more details circle NED-592 E3 on enclosed inquiry slip

All the refinements of its big brothers!



DETROIT ROCKING ELECTRIC FURNACE

This compact, efficient 60-lb. furnace has all the features of the famous, large capacity Detroit Electric Furnaces that melt metal for world famous products. Type GMS produces uniform, high quality melts with efficient and economical use of power. It's excellent for limited production, and for experimental and educational use. New rocking controller, 3-phase motor and independently-mounted electrode brackets are new features . . . Sold complete with transformer. Write for information.

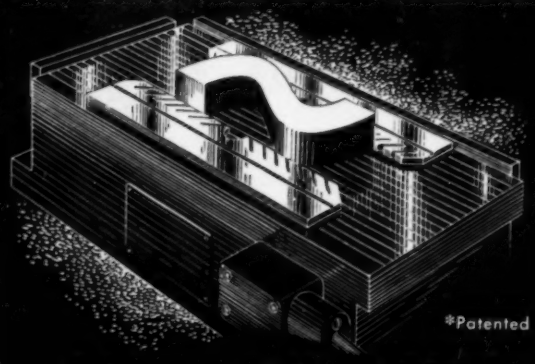
FEMA

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1060 26th St. • BAY CITY, MICHIGAN

Foreign Representatives: In BRAZIL—Equipamentos Industrias, "Eisa" Ltd., Sao Paulo; CHILE, ARGENTINA, PERU and VENEZUELA: M. Castellvi Inc., 150 Broadway, New York 7, N. Y.; MEXICO: Cia Proveedora de Industrias, Atenas 32-13, Apartado 27A3, Mexico 6, D. F., Mexico; EUROPE, ENGLAND: Birlec, Ltd., Birmingham.

For more details circle NED-594 E3 on enclosed inquiry slip

HOLD BRASS GLASS ALUMINUM
...any rigid non-magnetic materials ON YOUR MAGNETIC CHUCKS!



*Patented

Magna-Vise* DOES IT!

For all the details . . . write Dept. ND53.

Hanchett MAGNA-LOCK CORPORATION
Magna-Lock
Magnetic Chucks and Devices
BIG RAPIDS • MICHIGAN, U. S. A.

For more details circle NED-595 E3 on enclosed inquiry slip

Snap up Your Products with COLORFUL HANDLE BAR GRIPS

Attention Manufacturers of all wheel goods and portable equipment with handle bars! Snap up your products with "FLEX-GRIPS"—made of tough, flexible vinyl plastic. Popular styles and standard sizes for 1" bars or less. Brilliant colors of Red-Blue-Green-Maroon. Also Black and White.

Also a full line of all-Black rubber grips in all sizes to fit 1-1/16" bars or less. For complete details and quantity prices write:

The OHIO RUBBER Co.
DIVISION OF EAGLE-PICHER COMPANY
123 BEN HUR AVENUE • WILLOUGHBY, OHIO

For more details circle NED-596 E3 on enclosed inquiry slip

it's the finish that counts!

Roto-Finish CHIPS AND COMPOUNDS ARE FIRST in economy—in quality—in performance

Roto-Finish chips and compounds are carefully manufactured to fit your specific needs by the company that originated the Roto-Finish processes. They're specially designed to give the best results— faster — economically

SAVE MANHOURS AND MONEY by eliminating hand finishing. GIVE ABSOLUTE UNIFORMITY . . . in any quantity. MAINTAIN PRECISION TOLERANCES. CUT FINISHING costs as much as 80%. LOWER INITIAL AND MAINTENANCE costs.

THE ROTO-FINISH PROCESS puts grinding, deburring, descaling, polishing, britehoning and coloring on a MASS PRODUCTION BASIS. Put the experience and facilities of Roto-Finish to work for you on YOUR SPECIAL FINISHING PROBLEMS.

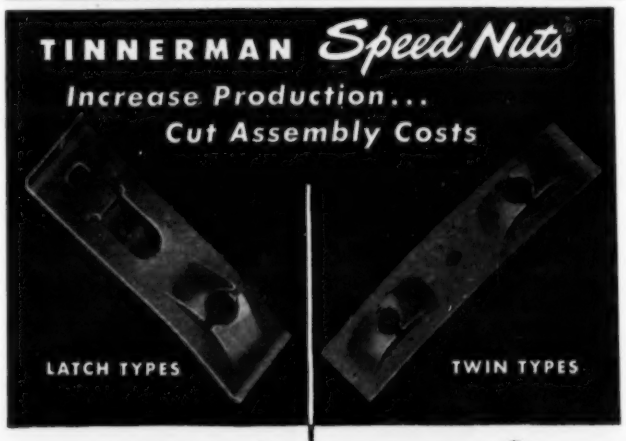
DW-45-36-2

WRITE FOR the fact-packed Roto-Finish catalog today!

Roto-Finish COMPANY
associated with The Sturgis Products Co.
3702 Milham Rd., Kalamazoo, Mich., P. O. Box 988, Ph. 3-5578
ORIGINATORS OF THE ROTO-FINISH PROCESS

For more details circle NED-597 E3 on enclosed inquiry slip

TINNERMAN *Speed Nuts*
Increase Production... Cut Assembly Costs



Snap into Bolt Receiving Position; Eliminate Welding and Staking!

Combine 2 Fasteners in ONE; Eliminate tapped Plates!

For better fastening methods, do as thousands of industry's leaders have . . . turn to SPEED NUTS, "The Fastest Thing in Fastenings." Above are two of thousands of standard types available to reduce assembly time, cut material costs and save on materials-handling! See your TINNERMAN representative or write direct for details on our FREE Fastening Analysis service for your products!

TINNERMAN PRODUCTS, INC.
Dept. 12, Box 6688, Cleveland 1, Ohio

For more details circle NED-598 E3 on enclosed inquiry slip

CONVEYOR ELEVATOR for handling bulk materials

Among improvements made in Senior elevator for handling all types of bulk materials are a 50 per cent increase in flight area and deepening the channel conveyor by 2½ in. to add to speed and capacity. Trough itself has a 1½-in. vertical rise to prevent spillover and a ½-in. rolled edge which adds to rigidity of each section. An improved cable type dolly is easily attached to help attain and support high levels. Elevator is available in 12, 16 and 20-ft lengths. Units can be "stacked" or a 4-in. intermediate section added. Aluminum trough covers are easily removed and heavy canvas chutes are available for both head and hopper ends. Made by **Burrows Equipment Co.**, 1315-NE Sherman Ave., Evanston, Ill.

For more details circle NED-599 E3 on enclosed inquiry slip

AUTOMATIC GRAPH FOLLOWER follows curves and converts data into electrical impulses

Digital plotter and photoelectric and electronic components necessary for automatically following curves and converting the data into electrical impulses are combined in the Logrinc digital graph follower. Housed in a compact cabinet, it serves as a combination input and output device for digital computing equipment, as well as application to other uses. Working as an output device, it will plot any two variables against one another, each electrical impulse received causing an incremental movement of the pen.

As a follower, it handles any continuous function, including those with infinite slopes. Applications include differential analyzers, digital computers, function generators, telemetering and continuous information. Two increments normally used are 1/100 or 1/64-in. Any line down to about 1/100-in. wide can be followed. Made by **Logistics Research Inc.**, Dept. A, 141 S. Pacific Ave., Redondo Beach, Calif.

For more details circle NED-600 E3 on enclosed inquiry slip

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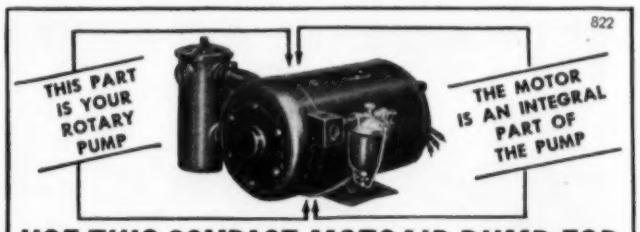
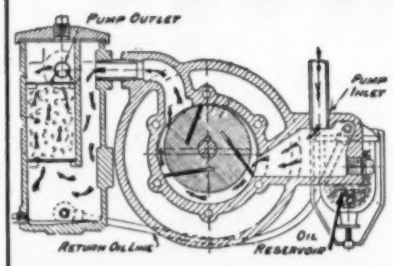


USE THIS COMPACT MOTOAIR PUMP FOR VACUUM

AVAILABLE IN SEVERAL SIZES



No other pump, so compact, provides such dependable vacuum in so little space. Less parts to wear because

NO BELTS
NO GEARS

VISIBLE LUBRICATION

The unique design illustrates points which appeal to machine designers. Used for years on packaging and graphic arts equipment, web-guiding, etc.

Write for Catalog—

NEW JERSEY MACHINE *Corporation*
FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES
1550 WILLOW AVENUE, HOBOKEN, N. J.

For more details circle NED-601 E3 on enclosed inquiry slip

Sperry *Hydraulic* REMOTE CONTROLS

FOR AUTOMOTIVE, RAILROAD, MARINE, MACHINE TOOL AND COUNTLESS OTHER APPLICATIONS

For Example

STRAIGHT LINE MOTION

Where required, special receivers can be supplied to provide straight line control motion instead of the usual swinging arc movement of standard receivers.

WRITE NOW for complete information or send prints and specs for special applications.

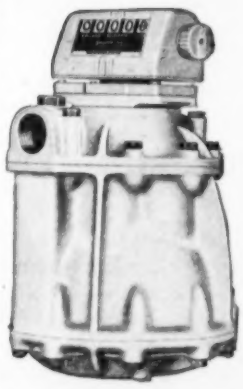
SPERRY PRODUCTS, INC.
1105 SHELTER ROCK ROAD,
Danbury, Connecticut
REPRESENTATIVES IN PRINCIPAL CITIES

For more details circle NED-602 E3 on enclosed inquiry slip

the standard of accuracy . . .

BOWSER XACTO

. . . the World's most widely used meters!



For over a quarter century Xacto meters have brought to industry after industry an entirely new and effective way to measure liquids accurately and dependably.

•

Xacto meters accurately measure and safely handle more than 662 different liquids in processing, blending, packaging and many other operations.

•

There is no substitute for Bowser Xacto meters for checking incoming deliveries, transferring, batching or recording consumption.

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BOWSER, INC. 1381 CREIGHTON AVENUE
FORT WAYNE 2, INDIANA

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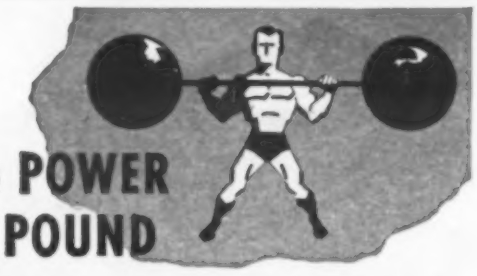
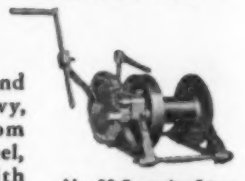
For more details circle NED-603 E3 on enclosed inquiry slip

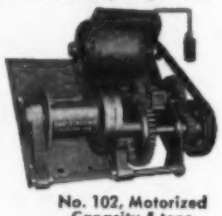


more POWER per POUND in DAVID ROUND WINCHES



No. 99 Capacity 5 tons

Where space available is small and the load-handling job is heavy, good service can be had from installation of a compact, all-steel, spur-geared DR Winch. With capacities up to 5 tons, these rugged hand powered or electric winches are adaptable to countless heavy-duty lifting and pulling operations. Sold through established distributors everywhere. For information write David Round & Son, Box 883, Cleveland 22, Ohio.



No. 102, Motorized Capacity 5 tons

Manufacturers of CHAIN HOISTS • ELECTRIC HOISTS • I-BEAM TROLLEYS • CRANES • WINCHES

David Round DR DAVID ROUND HOISTS & CRANES

▲ For more details circle **NED-604 E3** on enclosed inquiry slip ▲

Oildraulic® Transfer Bridges CLOSE THE GAP ACROSS SPUR TRACKS

ABOVE—Transfer Bridge raised and in use.

BELOW—Lowered and recessed for rail traffic.

Eliminate detours . . . speed up plant traffic

This hydraulically operated bridge forms a roadway over spur tracks to cut out costly detours and time-consuming congestion. Recessed rails become a part of the track when bridge is lowered. The Transfer Bridge is raised and lowered by a powerful Oildraulic jack, operated on the same principle as Rotary elevators and auto lifts. Power is supplied by a simple, inexpensive power unit. Dual jacks, automatically equalized, can be furnished for long spans, wide bridges, heavy loads.

Drawbridge and other types of transfer bridges are also built by Rotary to fit the plant layout and the job to be done. Mail coupon for catalog and complete data.

See our exhibit at Materials Handling Exposition May 18-22—Philadelphia

MAIL NOW FOR CATALOG

ROTARY LIFT CO.,
1063 Kentucky, Memphis 2, Tenn.

Send catalog on Oildraulic Transfer Bridges to:

Name.....

Address.....

.....

Rotary

Oildraulic® Transfer Bridges

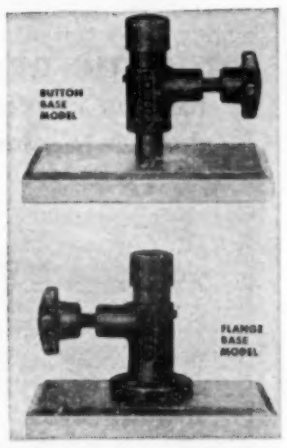
▲ For more details circle **NED-605 E3** on enclosed inquiry slip ▲

LATHE WORK DRIVERS made in five standard sizes

Offered as replacement or original equipment, line of George Fisher lathe work drivers consists of three eccentric jaws on all sizes but the largest, which has six jaws. These jaws have floating spring action to accommodate smooth or rough bars and forgings. All mechanism is covered with a protective hood that also acts as a manual opening and closing device for the jaws. A slight turn holds them open until work is placed between centers. Any increase in tool pressure and spindle speed automatically increases holding power of the driver. Jaws are easily reversed to accommodate direction of spindle rotation. Five standard sizes have work ranges from ½ to 1 7/16 in. to 4⅞ to 8 1/16 in. Distributed by **Skinner Chuck Co.,** 112 Edgewood Ave., New Britain, Conn.

▲ For more details circle **NED-606 E3** on enclosed inquiry slip ▲

SPRING JACK supports work being machined



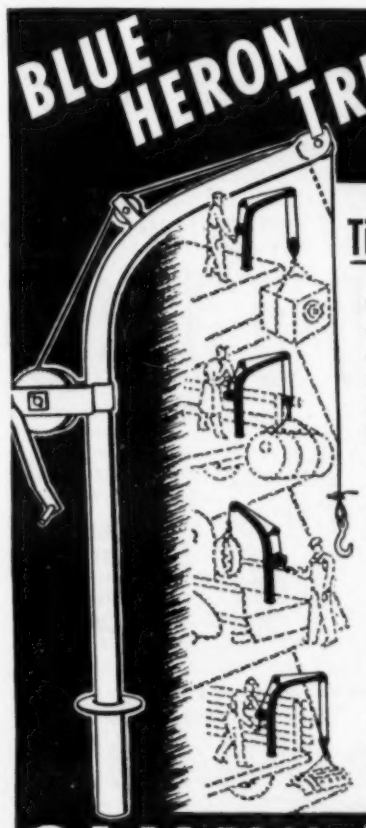
Materials or parts being machined can be supported by the flange and button base standard model spring jacks that obviate the need for special jacks on many jobs. Plunger, actuated by the spring, makes contact with the work without requiring manual pressure, then is locked by a hand-operated screw to prevent any movement. A dust cap protects working mechanism against chips and dust. All parts have a Parkerized jet black finish to prevent rust. Plunger and shoe are hardened and ground tool steel. Made by **Lodding, Inc.,** Dept. N-27, 79 Beacon St., Worcester 1, Mass.

▲ For more details circle **NED-607 E3** on enclosed inquiry slip ▲

DO YOU KNOW? Funny scenes and comic mice or serious thoughts and sound advice—you can take your pick from the 1953 "Directory of Occupational Safety Posters" which contains 756 miniature illustrations of colorful posters. This 72-page directory covers themes applicable to virtually all industrial fields. It contains advice to safety men on how to choose and use posters effectively. Sample of directory and price schedule of posters is available free from the National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

▲ For more details circle **NED-608 E3** on enclosed inquiry slip ▲

BLUE HERON TRUCK CRANE SAVES Time Money Labor



ONE MAN can handle up to ONE TON —EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

Equip ALL company trucks with sockets. Then change cranes from truck to truck.

CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

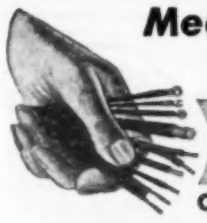
▲ For more details circle **NED-609 E3** on enclosed inquiry slip ▲

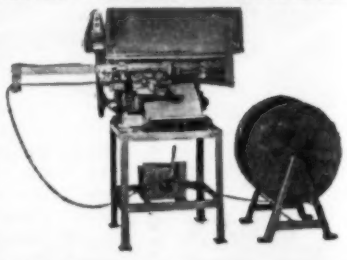
NEW ADJUSTABLE DRILL JIG eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works,** 22 Hancock St., Quincy, Mass. *Advt.*

▲ For more details circle **NED-610 E3** on enclosed inquiry slip ▲

Measure, Cut and Strip Insulated Wire IN ONE SPEEDY OPERATION ON ARTOS Automatic MACHINES





Does your production require cutting and stripping of insulated electric wire, cord, cable, etc.?

You can produce finished leads *much faster* . . . as many as 3000 per hour in 15-in. lengths . . . on this Artos Automatic Machine. Substantial time savings are obtained over the best manual or semi-automatic methods.

Operation is fully automatic—wire is taken from the reel, measured, cut to length and stripped at one or both ends. Unskilled help can handle the machine. Set-up is easy for different wire types and lengths.

MODEL CS-6E CAPACITY

FINISHED PIECES PER HOUR—From 3000 per hour up to 15 in. lengths to 500 per hour in 64-97 in. lengths.
MAXIMUM STRIPPING LENGTH—1½ in. at each end (greater stripped lengths are special).
MAXIMUM CUTTING LENGTH—97 in.
MINIMUM CUTTING LENGTH—2 in. (also as short as ⅞ in. under certain conditions).
TYPES OF WIRE HANDLED—Solid or stranded single conductor wires, parallel cord, heater cord, service cord, etc.
MAXIMUM WIRE SIZE—No. 10 stranded or No. 12 solid.

Other Artos Machines

The complete line of Artos automatic wire cutting and stripping machines will handle *cut lengths* from 1 in. to 60 ft., *stripped lengths* to 6½ in. at one end and 8½ in. at the other, wire from No. 12 to No. 000 gauge, and up to 3600 pieces per hour. Ask for recommendations on your problems.

WRITE FOR BULLETIN

Get the complete story—write for Bulletin 35-C on Artos Model CS-6 machines.

ARTOS ENGINEERING CO. *Automatic Wire Cutting and Stripping*

2751 S. 28th St. • Milwaukee 46, Wis.

▲ For more details circle **NED-611 E3** on enclosed inquiry slip ▲

"In-Sink-Erator" food waste disposer eliminates one of the messy kitchen problems faced by the housewife by having the garbage go down the drain. It is easily installed in sinks, safe to use.

One of the first garbage grinder manufacturers to use Klixon Protectors, In-Sink-Erator Mfg. Company has used Klixon Manual Reset protectors in their disposer since 1946. The reason — experience proves that these protectors can be depended on to provide protection against motor burnouts, thus assuring trouble-free operation for years on end.

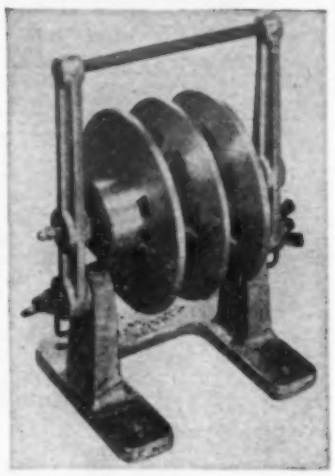
You, too, can keep your motors operating longer, reduce service calls and repairs by specifying and using Klixon protected motors. The additional cost is exceptionally low, pays for itself in customer goodwill by reducing motor burnouts.

SPENCER THERMOSTAT
Division of Metals & Controls Corporation
1905 Forest St., Attleboro, Mass.

KLIXON

▲ For more details circle **NED-612 E3** on enclosed inquiry slip ▲

VARIABLE SPEED CONTROL



Variable speed control of V-belt and equipment up to a maximum 3 to 1 ratio is provided by this single lever controlled unit. Mechanically simple in design and sturdily constructed to withstand hardest service, models 1A and 2A Toledo variable speed controls have numerous unique features including; plain, smooth pulley, eliminating noise and vibration; stepless speed variation up to full 3 to 1 ratio; minimum pulley diameters are increased to transmit greater H.P. over entire range; new pulley design providing cylindrical bottom for V-belts which fixes minimum pitch diameters, preventing damage to belts and giving increased torque; single arm support, for easy belt application; large shaft, oilite bearings and lubricant reservoir; sector plate serving as dial indicator and additional locking medium; unusually attractive prices.

Wheel assemblies can also be purchased without mountings for application on machines providing built-in speed control.

If you have a variable speed control problem, either on plant equipment or on machinery you build for sale, investigate the Toledo variable speed control . . . you'll be interested in its efficiency and low price. Ratios as high as 10 to 1 are available. **The Toledo Timer Co.,** 2224 Albion St., Toledo, O. **Advt.**

▲ For more details circle **NED-613 E3** on enclosed inquiry slip ▲

STOP BUYING LABELS

● NOW YOU CAN PRINT YOUR OWN LABELS AT THE SAME TIME YOU ADDRESS OR MARK THEM!

More firms everyday are eliminating the need for expensive, troublesome pre-printed shipping and identification labels with the new Weber Tag-O-Graph. This amazing machine prints, addresses, or marks shipping and identification labels from a roll of gummed or ungummed stock, in one continuous operation...at the rate of 100 to 150 per minute. And counts and cuts them to practically any size you want, too! Reproduces from an inexpensive, easily-prepared stencil.

Why not have the size and type of label you want...in the quantities you need... when you want them... all at a moment's notice?

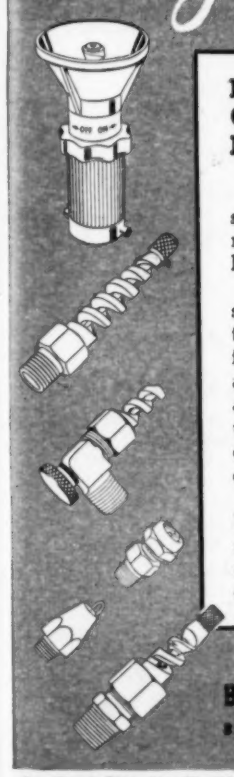
- √ Prints, addresses, marks labels in one operation.
- √ Counts and cuts them to size, too.
- √ Fast—100 to 150 labels per minute.
- √ Produces hundreds of different size labels.

Write today for samples of labels printed by this machine and further information.

Weber Addressing Machine Co.
237 West Central Road • Mount Prospect, Illinois
"For the answers to all your addressing, labeling and marking problems"

▲ For more details circle **NED-614 E3** on enclosed inquiry slip ▲

BETE Fog NOZZLES
for Industry, Agriculture, Fire Protection



New Spiral Principle Generates Fine Fog at Low Pressures!

Many spray problems are now being solved through the use of the new and radically different line of Bete Fog Nozzles.

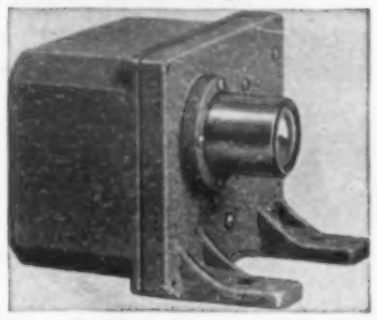
Bete Nozzles operate on a patented spiral principle of fog generation — they shear a continuous spiral sheet from a single jet to produce fine fog at low pressures. These unique nozzles are non-clogging, produce a more uniform drop size, and are so highly efficient that operating pressures can often be reduced.

The Bete line includes wide angle, hollow cone, full cone and flat spray nozzles for all purposes — in flow rates from ½ gallon per hour to 500 gallons per minute.

For Full Information and Catalog write:
BETE FOG NOZZLE INC.
85 Pierce Street, Greenfield, Massachusetts

▲ For more details circle **NED-615 E3** on enclosed inquiry slip ▲

PHOTOELECTRIC LIGHT SOURCE equipped with dual filament lamp



Protection against shut downs, delays and inconvenience caused by photoelectric light source failure is provided by an improved light source with a dual-filament lamp. When one filament fails, the other comes on automatically. At the same time a signal lights up to warn the operator that the lamp needs replacement. Also incorporated is an extra low voltage connection for use when distance between the light source and photoamplifier is under 5 ft. Light source is housed in a cast aluminum splashproof case and can be used with any Autotron photoamplifier. Made by **Autotron Co.,** P. O. Box 722-D, Danville, Ill.

▲ For more details circle **NED-616 E3** on enclosed inquiry slip ▲

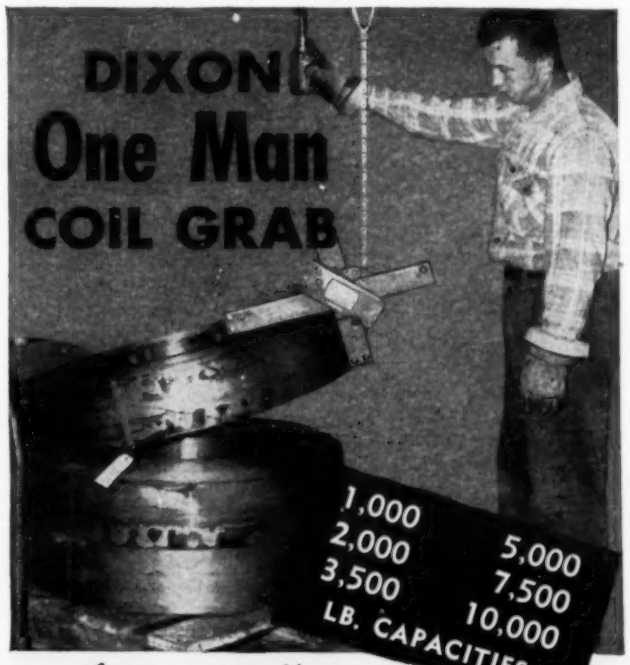
CONTAINER PUMP designed for continuous flow

Fast, easy pumping is accomplished by air flow system featured in Lu-Mar all-purpose pump. It is designed for transferring any liquid from one container to another. Two or three initial pump strokes of plunger handle exert pressure on the fluid, forcing it into the outlet hose. When shutoff valve is released, light pumping provides continuous flow. For compact storage, outlet hose nozzle slips over end of plunger handle. A strainer is included on nozzle end of outlet hose. Made by **Lucas Metal Products,** 951½ Exchange St., Rochester, N. Y.

▲ For more details circle **NED-617 E3** on enclosed inquiry slip ▲

DO YOU KNOW? The first big-time traveling materials handling show is already "on the road." Recognizing the importance of economical materials handling, a road show has been launched composed of two 33,000-lb trailers, a complete assortment of gasoline and electric industrial trucks, special attachments, a variety of hoists and an operating crew. Included is a 68 x 40 Big Top. Over the next two years, this demonstration of possible economies of modernized industrial materials handling equipment and techniques will travel in excess of 25,000 miles and will hit every major industrial center. It is sponsored by Yale & Towne Mfg. Co., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

▲ For more details circle **NED-618 E3** on enclosed inquiry slip ▲



Automatically **ADJUSTS TO COIL SIZE**

Seven standard models available to handle coils from 1" to 48" wide.

Export Dept.: 306 W. Washington Blvd., Chicago 6, Ill.

DIXON *Automatic Tool, Inc.*
2310 23rd Ave. • ROCKFORD, ILLINOIS

▲ For more details circle **NED-619 E3** on enclosed inquiry slip ▲

▲ For more details circle **NED-620 E3** on enclosed inquiry slip ▲

for jobs where you "can't take chances"...

again proved dependable for controlling repetitive cycles at 60 passes per minute

This Zagar acoustical wall tile drilling machine employs 5 Snap-Lock limit switches—three automatically controlling movements of the 96 spindle drill head and two actuating the hydraulic system operating the work table.

Zagar Tool Inc., Cleveland, O., manufactures drill heads, drilling and broaching machines. After 10 years experience with Namco Snap-Lock limit switches applied to a wide variety of large and small machine tools, Mr. Frank Zagar, General Manager states—

"for the fast, exacting and dependable controls in our machines, we can take no chances—we recommend Snap-Locks to customers all over the country."

This confidence is typical of expressions from machine tool builders, 90% of whom have adopted Snap-Locks as standard built-in equipment—some using more than 200 units on a single installation.

You can depend on Snap-Lock—Ask your Engineers to contact ours. Specifications Bulletin EM-51.

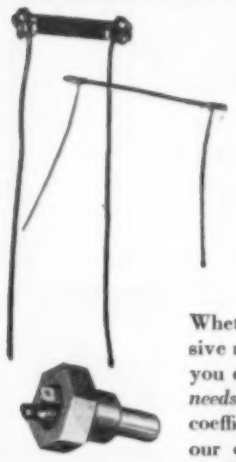
Heavy Duty Features of SNAP-LOCK Limit Switches
built BY machine tool builders FOR machine tool builders

- Separate safety walled enclosures for electrical and mechanical sides.
- Hardened steel parts, rugged, compact.
- Heavy insulation, oil and dust resistant case.
- Positive lock in "on" and "off" positions.
- Single pole normally open and closed, double break contact arrangements.
- Self wiping coin silver contacts.
- Wide variety of standard mountings and operating levers.

ELECTRICAL MANUFACTURING DIVISION
The NATIONAL ACME CO.
182 EAST 131 STREET, CLEVELAND 8, OHIO

Acme-Gridley Bar and Chucking Automatics: 1-4-6 and 8 Spindle • Hydraulic Thread Rolling Machines • Automatic Threading Dies and Taps • Limit, Motor Starter and Control Station Switches • Solenoids • Contract Manufacturing

▲ For more details circle **NED-621 E3** on enclosed inquiry slip ▲



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to work right

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high-precision
thermistors

Used in this typical application for sensing temperature of hydraulic oil.

Whether you use these temperature responsive resistors in standard or special models, you can be sure of this. *They'll match your needs* for resistance values, size, temperature coefficient, mountings and quality. Made in our own plant under carefully controlled conditions, Bendix-Friez Thermistors know no equal.

STANDARD TYPES FOR IMMEDIATE DELIVERY

Size (inches)	@ +30°C.	@ 0°C.	@ −30°C.
.140 x .75	45.0 ohms	86 ohms	194 ohms
.040 x 1.5	12,250 ohms	26,200 ohms	65,340 ohms
.018 x 1.5	35,000 ohms	82,290 ohms	229,600 ohms

Write for details.

FRIEZ INSTRUMENT DIVISION of Bendix AVIATION CORPORATION

1444 Taylor Avenue, BALTIMORE 4, MARYLAND

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

For more details circle **NED-622 E3** on enclosed inquiry slip

AIR-DRY OR BAKE

SPRAY, DIP OR BRUSH

FOR PRODUCT FINISHING AND INDUSTRIAL MAINTENANCE

Get these facts

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...the modern multi-purpose enamel!

Here's the versatile finishing material industrial users asked for—KEM LUSTRAL—*one* top-quality enamel that gives you all these advantages . . . and more—

- *—will air-dry or bake*
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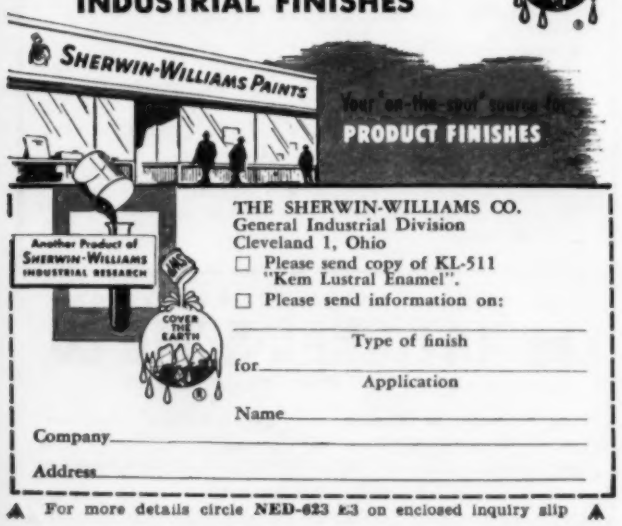
KEM LUSTRAL is one of a complete line of industrial quality product finishes available through Sherwin-Williams Branches in all principal cities. Consult your classified telephone directory for location of branch nearest you. Ask for a copy of KEM LUSTRAL Brochure KL-511. Or mail the coupon below.

Services of trained industrial finish specialists available in your area through nearest Branch.

SHERWIN-WILLIAMS

INDUSTRIAL FINISHES



THE SHERWIN-WILLIAMS CO.
General Industrial Division
Cleveland 1, Ohio

☐ Please send copy of KL-511 "Kem Lustral Enamel".

☐ Please send information on:

_____ Type of finish

for _____ Application

Name _____

Company _____

Address _____

For more details circle **NED-623 E3** on enclosed inquiry slip

VOLT-AMMETERS

three pocket-size instruments perform wide variety of functions

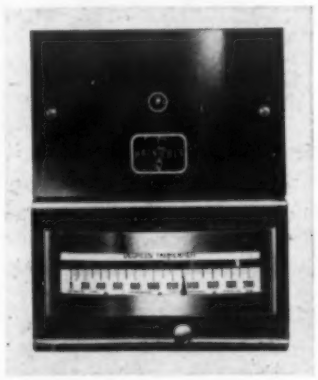
"Snap-around" construction of series of three Amprobe pocket-size volt-ammeters permits them to measure current instantly, without connection to the conductor. Readings can be taken without interrupting the circuit or shutting down equipment. Determination of load conditions, checking motor overloads, balancing loads, locating grounds, tracing shorts and checking voltage losses are among jobs that can be performed with the instruments.

Voltage test leads have retractible safety plug that automatically insulates itself when removed from the meter. Jaws are insulated down to the sockets. Model 300 has nine ranges up to 300 amp ac and 600 v ac. Model 600 ranges up to 600 amp and 600 v, while model 1200 ranges up to 1200 amp and 600 v. Made by **Pyramid Instrument Corp.**, Dept. NED, Lynbrook, N. Y.

For more details circle **NED-624 E3** on enclosed inquiry slip

PYROMETER CONTROLLERS

indicating type units offered in ranges from 0-400 to 0-3000° F



Close temperature control of furnaces, ovens, kilns, salt pots, plastic molds and other heating equipment is provided by line of Free-Vane electronic pyrometer controllers. Units serve to actuate relays, electric contactors, solenoid valves and motor valves. Control system is based on frequency modulation principle, a millivoltmeter mechanism and unit plug-in construction. Basic model can be used for low-open, high-open and low-high control.

Model with extra plug-in unit proportions current input for straight-line control of many heating appliances. A double control unit is offered to provide low-open-high or low-normal-high control. All models can have thermocouple 'fail safe' protection. Controllers are made in wide selection of temperature ranges from 0-400° to 0-3000° F. Made by **Bristol Co.**, 30 Bristol Rd., Waterbury 20, Conn.

For more details circle **NED-625 E3** on enclosed inquiry slip

For more details circle **NED-626 E3** on enclosed inquiry slip

There was a young worker named Printer
Who slipped and got stuck with a splinter!
Then he heeded a tip
And installed Multigrip . . .
Now he's safe though he speeds like a sprinter!

U·S·S multigrip FLOOR PLATE

UNITED STATES STEEL CORPORATION, PITTSBURGH
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, CHICAGO
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

Sold by leading distributors from coast to coast 3-693

UNITED STATES STEEL

For more details circle **NED-627 E3** on enclosed inquiry slip

Dependable

MEASURING & CHECKING EQUIPMENT

BOX PARALLELS. In 15 sizes, ranging from 3 x 4 x 12 and up.

SURFACE PLATES Over 30 sizes, ranging from 7 x 7½ to 96 x 192.

SLOTTED ANGLES In 19 sizes, ranging from 4 x 9 x 5 and up.

UNIVERSAL ANGLES In 10 sizes, ranging from 4 x 3¾ x 5 and up.

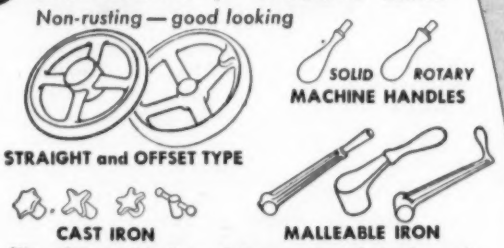
and Now

Send for Complete Catalog

HAND WHEELS, KNOBS, HANDLES

Cadmium Plated READY TO DELIVER

Non-rusting — good looking



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STRAIGHT and OFFSET TYPE

CAST IRON

MALLEABLE IRON

We also build jigs, fixtures, special tools and machinery. Send us your blueprints.

MACHINE PRODUCTS CORPORATION
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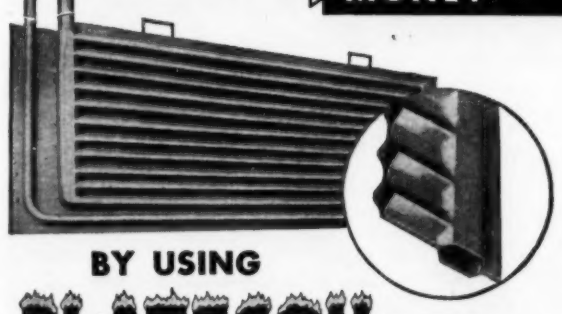
YOU SAVE
- STEEL
- MANHOURS
- MONEY



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PLATECOIL FOR TANK HEATING AND COOLING

YOU SAVE CRITICAL STEEL because "Platecoils" require less than ½ the steel used in pipe coils of the same surface area. A 22" x 119" Platecoil weighs 95 lbs. against 239 lbs. for an equivalent 2" pipe coil. 144 lbs. steel saved. YOU SAVE CRITICAL MANHOURS because "Platecoils" are easily installed, cleaned or replaced in minutes . . . No down-time . . . No tank dumping. Many manhours saved.
YOU SAVE MONEY because "Platecoils" cost up to 50% less in initial cost and require less maintenance. Investigate "Platecoils" today.

Send for complete technical manual and descriptive Bulletin No. P57

PLATECOIL Division
KOLD-HOLD MFG. CO.
LANSING 4, MICHIGAN

For more details circle **NED-629 E3** on enclosed inquiry slip

WANTED! TOUGH LIFTING JOBS for Gripper WW*slings

WW* WOVEN WIRE, the newest, most versatile type of sling in the materials handling market. Only Gripper slings are made from WOVEN WIRE.

You can make easy work of the toughest lifting jobs with a Gripper Woven Wire Sling! Its full flexibility gives a tight grip around any shape load, provides stability and safety not obtainable in any other type slings. All metal construction means longest life, freedom from damage even in handling sharp-edged loads such as steel flats and squares. Woven wire construction means no kinking, tangling, sudden breaks in the sling body.

Available in any width or length . . . every Sling pretested to make sure it meets loading specifications.

The Cambridge Wire Cloth Company
DEPARTMENT R
CAMBRIDGE 5, MARYLAND

See your mill supply, materials handling or safety equipment distributor for full information...or write direct for free illustrated catalog and price list.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

Offices in Principal Industrial Cities
Distributors-write for open territory data!

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NEW! HEAVY DUTY CHELSEA FANS

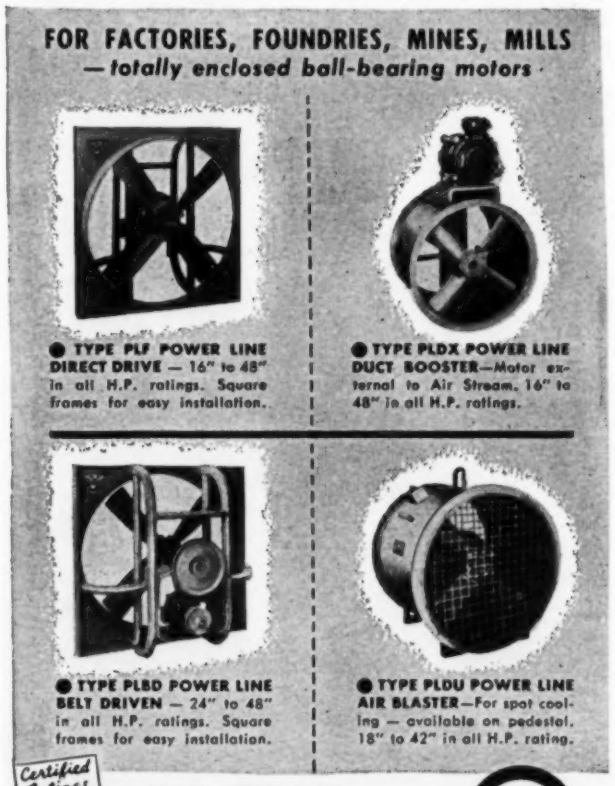
POWER LINE CHELSEA FANS

—for industrial applications
DIRECT DRIVE OR BELT DRIVE
NON-OVERLOADING PROPELLERS

SOLVE YOUR VENTILATING PROBLEMS
with Chelsea's new heavy duty airfoil type exhaust fans. For use in exhausting, duct work, filter installations, range or vat hoods, penthouse units, paint spray booths, where static pressures are encountered.

WRITE FOR NEW CHELSEA CATALOG No. 400
including detailed information on type, size, specifications, engineering data and installation recommendations. 30 types and over 200 sizes. Please address requests to Dept. K-5.

FOR FACTORIES, FOUNDRIES, MINES, MILLS
—totally enclosed ball-bearing motors



● TYPE PLF POWER LINE DIRECT DRIVE — 16" to 48" in all H.P. ratings. Square frames for easy installation.

● TYPE PLDX POWER LINE DUCT BOOSTER—Motor external to Air Stream. 16" to 48" in all H.P. ratings.

● TYPE PLBD POWER LINE BELT DRIVEN — 24" to 48" in all H.P. ratings. Square frames for easy installation.

● TYPE PLDU POWER LINE AIR BLASTER—For spot cooling — available on pedestal. 18" to 42" in all H.P. rating.

Certified Ratings

PROPER VENTILATION IS AN INVESTMENT!
Look for this Symbol of Quality . . . →
← Look for this Seal of Certified Ratings

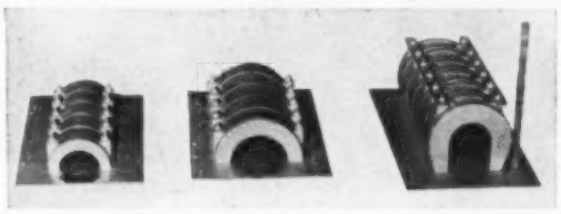
CHELSEA

CHELSEA FAN & BLOWER CO., Inc.
PLAINFIELD, NEW JERSEY

For more details circle NED-631 E3 on enclosed inquiry slip

PLATE MAGNETS
for removing tramp iron

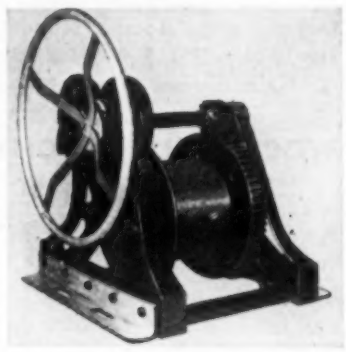
Redesigned permanent plate magnets for removing tramp iron from material carried in chutes, ducts or on belts have their magnetic strength certified



for the mechanical life of the unit. Models 1-H and 2-H Perma-Plate have large Alnico blocks of new design, increasing strength by as much as 50 per cent. They are Mill Mutual approved for Class A and B installations. Made by **Dings Magnetic Separator Co.,** 4758 W. Electric Ave., Milwaukee 46, Wis.

For more details circle NED-632 E3 on enclosed inquiry slip

HEAVY DUTY WINCH
develops up to 15-ton pull



Though developed for barge line use, this 15-ton barged connector winch is also usable for industrial handling and pulling operations. It is instantly reversible for installation on either side of barge, and deck fastener brackets permit flush welding to steel decks or floors, as well as normal bolted fastening. Optional drum diameters of 10 and 14 in., with 6 and 4-in. flanges permit use of various cable sizes. Three speeds of 4:1, 19:1 and 109:1, with positive gear change, give desired speed and power for any operation. Two-way dogs are used to hold drum. Made by **Beebe Bros.,** 2718 Sixth Ave. S., Seattle 4, Wash.

For more details circle NED-633 E3 on enclosed inquiry slip

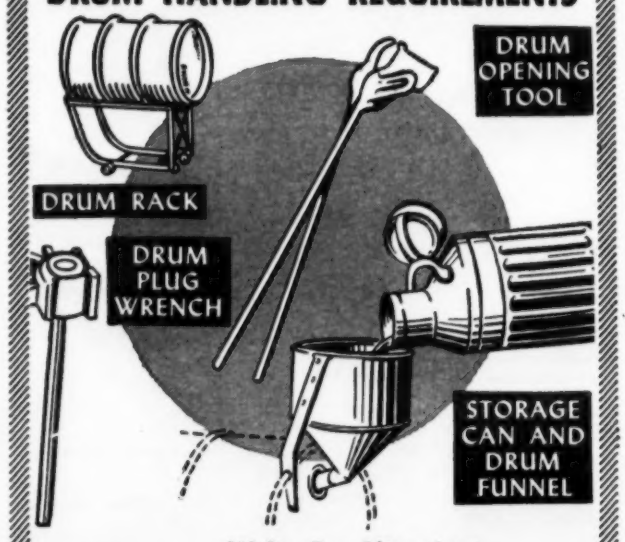
RUBBER TUBING
has braided cotton or rayon cover

Braided rayon or cotton cover of this fine rubber tubing can be made in wide variety of colors with special identification yarns as desired. Designed for light air and water industrial service, tubing is flexible, lightweight, easy to handle and durable. It is made in inside diameters of 5/32, 7/32 and ¼ in. with weights ranging from 26 to 37 lb per 1000 ft. Made by **Hamilton Rubber Mfg. Corp.,** 51 Mead St., Trenton 3, N. J.

For more details circle NED-634 E3 on enclosed inquiry slip

SAFETY EQUIPMENT FOR ALL INDUSTRIES

to better serve your
DRUM HANDLING REQUIREMENTS



Write For Literature

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET PHILADELPHIA 33, PA.

For more details circle NED-635 E3 on enclosed inquiry slip

Abart GEARS

96 PITCH TO 5/7 D.P.
¼" P.D. TO 18" P.D.

QUALITY GEARS, precision-cut to your specifications

Available in steel, brass, bronze, cast iron, any metal and any non-metallic gear material. All gears are custom cut to specifications.

Spur Gears • Bevel Gears • Worms • Worm Wheels • Helical and Spiral Gears • Internal Gears • Sprockets • Finishing Machine Racks

Send blueprints and specifications (or samples) for quotations on above type gears, worm and worm wheels, or sprockets—any quantity.

Abart GEAR & MACHINE CO.
4826 WEST 16th STREET • CHICAGO 50, ILLINOIS
Mfrs. of Gears and Speed Reducers • Bishop 2-2524

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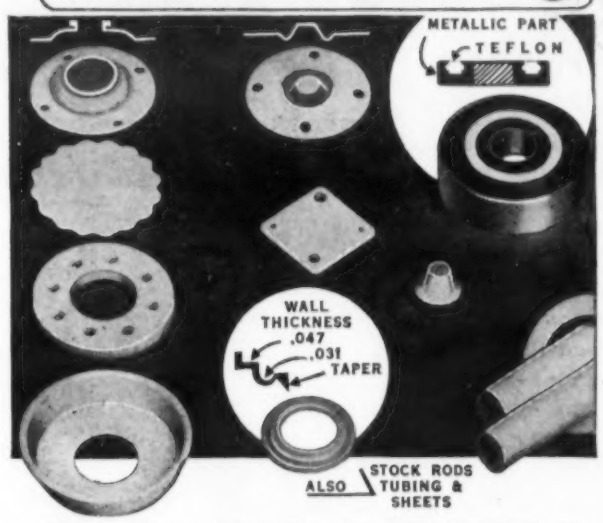
GOT A TOUGH ONE IN **TEFLON?**
CONTACT SPARTA, SPECIALISTS IN TEFLON MOLDING



Above, some recent Teflon moldings by Sparta. Represented are Diaphragms, Special Washers, Discs, Seals and Cup Seals with difficult undercuts, varying wall thicknesses, other physicals formerly thought impossible to mold in Teflon.

Perhaps YOU can improve products, processes and profits with Teflon MOLDED TO YOUR SPECIFICATIONS. Sparta offers painstaking cooperation, no obligation . . . just write or call

SPARTA HEAT TREAT CO. PLASTICS DIVISION, EAST SPARTA, OHIO
PHONE EAST SPARTA 5651 (CANTON, OHIO EXCHANGE)

For more details circle NED-637 E3 on enclosed inquiry slip

LUFKIN
MITI-MITE Magnetic Tools

ATTACH INSTANTLY
TO EITHER CURVED OR FLAT SURFACES

PORTABLE DEMAGNITIZER
Completely de-magnetizes by merely sliding over surface of the item. Lightweight — easily portable — small size for easy use in hard-to-reach places.

10 TOOLS • HUNDREDS OF SHOP USES . . . . . .
Handy-Lites give you light where you need it — light those hard-to-see places. 4x magnifier. Heavy duty indicator with or without surface gage shoe. Indicator holders take nearly any indicator without haphazard clamping.

BUY LUFKIN TAPES
RULES • PRECISION TOOLS
FROM YOUR DISTRIBUTOR

MAIL COUPON FOR FREE BOOK

LUFKIN RULE CO., Saginaw, Mich. Dept. NED

RUSH ME YOUR FREE BOOKLET DESCRIBING LUFKIN MITI-MITE MAGNETIC PRODUCTS.
AD No. 240

Name_____
Street_____
City_____ State_____

For more details circle NED-638 E3 on enclosed inquiry slip

HORIZONTAL POWER . . .

. . . where Belt Surface Conveyors can't stand abuse of heavy metals, sharp corners or rough edges, Metzgar "Live Roller" units provide an all-metal, powered bearing surface. May be used as power booster in gravity line. Work can be slowed or held without stopping machine.

4 STOCK SIZES
11½" - 15"
18" - 24"
WIDTHS

Furnished portable or permanent mounted. Choice of one to five rollers per foot. Lengths to suit. Ball bearing throughout. Gearmotor AC or DC drive.

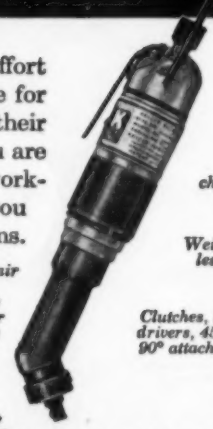
ASK FOR FOLDER NO. 1249

METZGAR CO.
MFGRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES • REEL DOLLIES
METZGAR CONVEYORS
416 Douglas N.W.
GRAND RAPIDS 4, MICH.

For more details circle NED-639 E3 on enclosed inquiry slip

Less Fatigue More Production WITH KELLER AIR TOOLS

Less expenditure of physical effort means more energy available for intelligent workers to "use their heads." When they know you are providing the *best* air tools, workers are better satisfied—and you have improved labor relations.



Send for illustrated descriptive bulletin and detailed information

Keller Tool Company
GRAND HAVEN, MICHIGAN

For more details circle NED-640 E3 on enclosed inquiry slip

HERE'S A "GOLD MINE" OF USEFUL INFORMATION on Roller Chains and Sprockets

Our new Baldwin-Rex Roller Chain and Sprockets catalog contains a wealth of useful information, complete specifications and prices on our complete line of stock roller chains and sprockets, examples of drive selection, how to select and order sprockets, maintenance information, flexible couplings and much, much more . . . 56 pages in all.

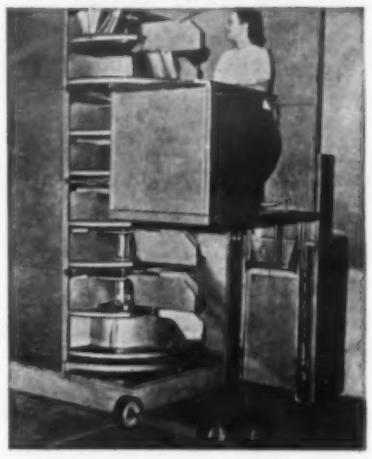
Everyone who uses roller chains or has a power transmission problem should have this book. *Send for free copy today.*

BALDWIN-REX ROLLER CHAINS
® Chain Belt Company 53-413
Baldwin-Duckworth Division
364 Plainfield St., Springfield 2, Mass.

Gentlemen: Please send me Bulletin 52-1.
Name.....
Company.....Dept.....
Address.....
City.....State.....

For more details circle NED-641 E3 on enclosed inquiry slip

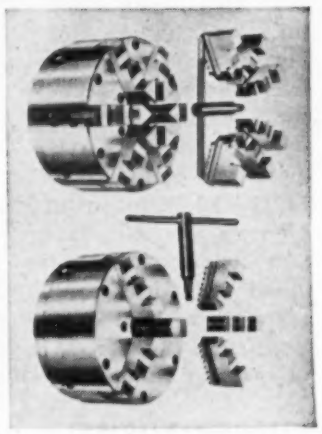
MODULAR FILING UNIT
space savings file uses lift



Active records can be filed twice as high as standard four-drawer files with the Rotor Corres-File, a modular filing unit that makes use of hydraulic lift unit that lifts desk, chair and operator to any desired level. It also moves forward and backward, allowing one operator to perform horizontal rotary filing from a seated position. Standard four-tier height unit, which requires no lift mechanism for filing from a seated position, holds the equal of 12 standard correspondence drawers in same amount of floor space. It can be adapted to accommodate any size card or record, from addressograph plates to legal size folders. Made by **Wassell Organization, Inc.**, Dept. NE, P. O. Box 390, Westport, Conn.

For more details circle NED-642 E3 on enclosed inquiry slip

WORK HOLDING CHUCK
holds up to 8 in. diameter work



Available with three or six internal-external jaws, this 9-in. Ajust-Tru chuck will hold up to 8 in.diameter work. It embodies all the features of smaller model chucks such as 0.0005-in. precision within 1 minute on original chucking and universal scroll chuck rechucking speed on duplicate work, plus generated teeth on pinion and bevel gear portion of scroll for smooth operation. Made by **Buck Tool Co.**, 322 Schippers Lane, Kalamazoo 62, Mich.

For more details circle NED-643 E3 on enclosed inquiry slip

DO YOU KNOW? Many industries are faced with the problem of setting up, shipping and taking down trade show exhibits. Now there's a line of E-Z Pak self-contained exhibits that can be packed and unpacked by one man because they fold into one compact shipping unit. These self-packaging displays are offered in three sizes complete with translucent lighting, ample display and panel space, and provision for storage and display of literature. Made by Ohio Displays, 2206 Superior Ave., Cleveland 13, O.

For more details circle NED-644 E3 on enclosed inquiry slip

ENGRAVING and MARKING

The Green Engraver

ENGRAVES, ROUTS PROFILES and MODELS
A real money saver for industry.
Proven by the experience of tool and die, electronic machine, radio, electrical and instrument manufacturers.

The Green Engraver zips out precision work on metal, plastics, wood, glass, hard rubber etc. . . . engraves panels, name plates, scales, dials, molds, lenses, instruments, instruction plates, directional signs . . . by simple tracing. *Routing, profiling and three dimensional modeling indicate its versatility.* Electric etching attachment available.

Specify the Green Engraver for the best in low cost performance.
Special attachments and engineering service available for production work.

FREE — Fact-packed folder yours upon request.

Green Instrument Co.
INCORPORATED
375 PUTNAM AVENUE CAMBRIDGE 39, MASS.

For more details circle NED-645 E3 on enclosed inquiry slip

New 3M Product

Provides Gasket-like Seal for Metal Corners, Surfaces

Wherever solid slab corners need sealing . . . wherever faying surfaces require water-tight protection—you can use EC-1202, 3M's flexible new sealer.

Made of synthetic rubber ribbon, EC-1202 is reinforced with sturdy fabric for strength, which helps it hold its dimensions . . . makes it easy to apply.

Available in widths ranging from ¼" to 2", in ¼" increments, EC-1202 is offered in 100' rolls, 1/16" thick . . . in 200' rolls, 1/32" thick. Why not consider it for your sealing needs?

For more complete details, write to 3M, Dept. 85, 411 Piquette Avenue, Detroit 2, Michigan:

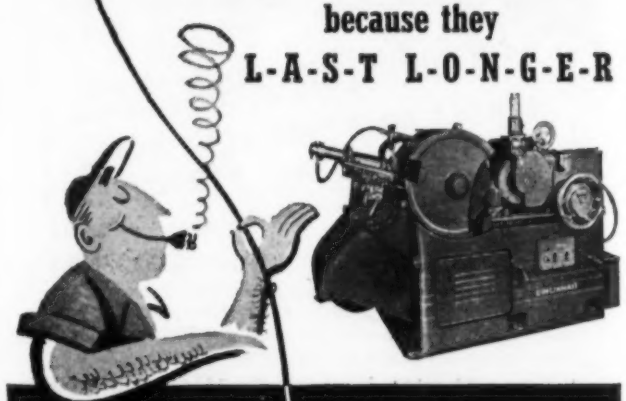
3M COMPANY
MINNESOTA MINING AND MANUFACTURING COMPANY
ADHESIVES AND COATINGS DIVISION

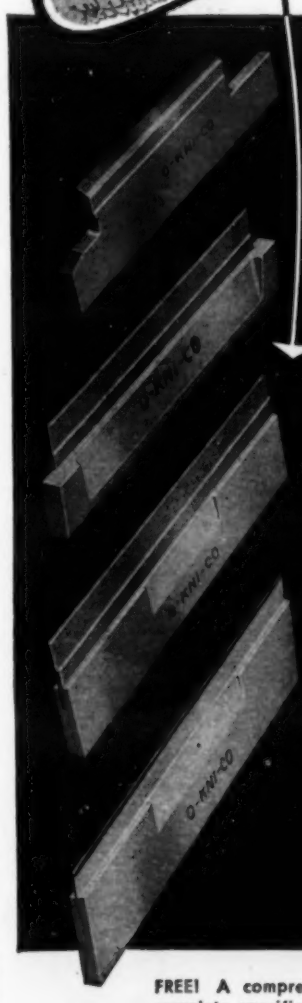
see our catalog in PRODUCT DESIGN FILE or write for copy

For more details circle NED-646 E3 on enclosed inquiry slip

OK CENTERLESS BLADES

. . . standard equipment on practically every centerless grinder built because they L-A-S-T L-O-N-G-E-R





The phenomenal long life of Ohio Centerless Work Blades and Guides is due to their extreme hardness, high finish and close tolerances. Long blade life means high production resulting in lower costs.

Made of tungsten carbide, high speed steel, cast alloy or iron. Non-metallic tips available upon request.

In addition to standard blades, special contours, angles or shapes are made to your blue prints.

Manufacturers for the Metal Working Industry of
- Hardened Spacers
- Hardened Ways
- Gibs
- Ball Races
- Slitter Knives
- Shear Blades
- Rotary Shear Knives
- Bronze Ways
- Wear Strips

GO WITH OHIO GREEN

FREE! A comprehensive bulletin with complete specifications. Write Dept. H.

THE OHIO KNIFE CO.
CINCINNATI 23, OHIO

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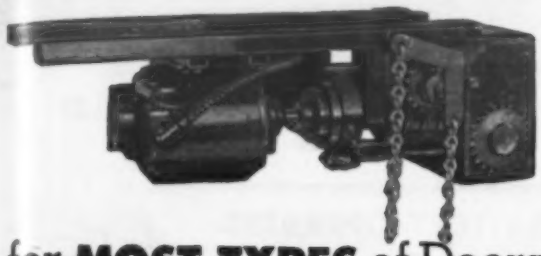
ONE Electric Operator



for **MOST TYPES** of Doors

"BARCOL" EQUIPMENT REDUCES MAINTENANCE COSTS...

This Barcol Electric Door Operator will handle *any* type of overhead, sliding, or steel-rolling door, or sliding gate. Thus ONE make of operator can handle *all the powered doors* in your plant. Your maintenance department, then, stocks only a minimum of stand-by parts. Sole responsibility for helping with your problems rests with ONE factory representative. In this way, costs are reduced and convenience and service are greatly increased. See your "Barcol" representative for detailed suggestions. ASK FOR LITERATURE.

Factory-Trained Sales and Service Representatives in Principal Cities

BARCOL — BARBER-COLMAN COMPANY
108 MILL STREET, ROCKFORD, ILLINOIS

For more details circle NED-648 E3 on enclosed inquiry slip

NOW... *Correct Taper*

—FOR MAXIMUM GRIP
—FOR EASY REMOVAL IN

INTERCHANGEABLE TAPERED BUSHINGS AND SPROCKETS

BOSTON *Gear*

SHOLD-A-GRIP

Correct Taper

—FOR STRONGER, SLIP-PROOF GRIP
—FOR EASY REMOVAL Provides maximum holding power, even on worn shafts. Permits easy disassembly.

Broader Size Range

FIT SHAFTS ½" to 2½" BY 16THS
Any commonly used sprocket, ½" to 2¼" pitch can be interchanged on an extended range of shaft sizes.

FOR COMPLETE INFORMATION, ask your BOSTON Gear Distributor, or write: Boston Gear Works, 69 Hayward St., Quincy 71, Mass.

SEE YOUR BOSTON *Gear* DISTRIBUTOR

For more details circle NED-649 E3 on enclosed inquiry slip

SHORT RUN STAMPINGS

DESCRIBED IN NEW CATALOG No. 718

New catalog describes HPL's "know-how" which can save up to 80% of conventional tooling costs.

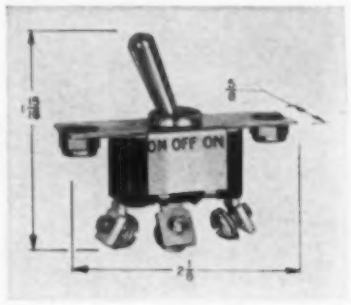
Facilities for producing stampings in runs of 25 to 25,000 pieces in various shapes and materials are described and shown. **HPL** is making this attractive four-page catalog available to production, purchasing and management personnel to assist them with their stamping problems. Catalog No. 718 will be sent to you upon receipt of publication or letterhead request.

1049-HPL

HPL Manufacturing Co.
15211 MILES AVENUE • CLEVELAND 28, OHIO

For more details circle NED-650 E3 on enclosed inquiry slip

TOGGLE SWITCHES made in two series to conform to JAN and AN specifications

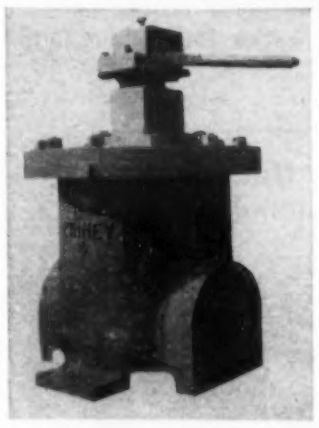


Conforming to Army-Navy aeronautical (AN) and joint Army-Navy (JAN) specifications are two series of toggle switches. Nine single-pole switches in the IITS series are bushing mounted, have a sealed toggle lever and are offered with screw or solder type terminals. Ratings for this series are 20 amp resistive load at 30 v dc, 15 amp resistive load at 125 v ac (maintained contact version) and 15 amp resistive load at 30 v dc and 125 v ac (momentary contact version).

Other series, the 31TS, includes eight three-hole mounting type single-pole toggle switches. Ratings are 40 amp resistive load at 30 v dc, 20 amp resistive load at 115 v ac (maintained contact type) and 30 amp resistive load at 30 v dc or 20 amp resistive load at 115 v ac (momentary contact type). Made by **Minneapolis-Honeywell Regulator Co.**, Micro Div., 205 S. Chicago Ave., Freeport, Ill.

For more details circle NED-651 E3 on enclosed inquiry slip

SELF-CLEANING STRAINER removes suspended particles from various types of liquids

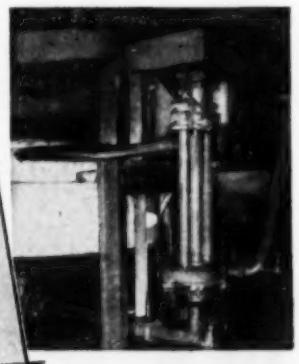


Designed for extra coarse cleaning, this manually operated self-cleaning strainer will remove fine suspended particles from raw or process water and dispose of them. Strainer consists essentially of a heavy cast iron housing containing a cast iron drum in which the straining element is retained. Water to be strained enters the bottom of the housing and rises around the outside of the drum, then is forced through the screen media which retains the foreign matter.

Clean liquid is released through an outlet diametrically opposite the inlet. Cleaning is by opening a backwash orifice in the side of the housing to create a reversal of flow to wash out foreign matter. Size of screen mesh is determined by degree of cleaning desired. Strainer is built in 2 to 24-in. pipe sizes for working pressures from 75 to 500 psi or higher. It can also be built of noncorrosive materials. Made by **S. P. Kinney Engineers, Inc.**, 201 Second Ave. E., Carnegie, Pa.

For more details circle NED-652 E3 on enclosed inquiry slip

This NEW *Nagle* "TV" PUMP is NO "WALLFLOWER"



IT'S prim and clean, and designed to mount on wall or side of a tank or sump, but it's no "wallflower." You'll find it in the thick of things! A single stage, bottom entrance, vertical shaft, dry pit pump for handling abrasive mixtures and corrosive liquids and slurries —pumps anything that will flow. The Nagle type "TV" gives you:

- Freedom from leakage --- Clean floors assured
- No stuffing box
- No submerged bearings
- Sizes from ¾" to 10"
- Capacities to 4,000 g.p.m.

Send for Bulletin "TV"

NAGLE PUMPS — NAGLE PUMPS, INC.
1265 CENTER AVENUE, CHICAGO HEIGHTS, ILLINOIS

PUMPS FOR ABRASIVE AND CORROSIVE APPLICATIONS

For more details circle NED-653 E3 on enclosed inquiry slip

BLAW-KNOX STEEL GRATING in the Front Rank of Industry ON ALL 5 COUNTS

OPEN SPACE • STRENGTH
LONG LIFE • CLEANNESS
SAFETY

Blaw-Knox Steel Grating is electroforged into rigid, one-piece panels, using twisted cross bars for firm footing. Bring your open steel flooring problems to Blaw-Knox for expert help. Bulletin 2365 sent on request.

BLAW-KNOX EQUIPMENT DIVISION OF BLAW-KNOX COMPANY
2068 Farmers Bank Bldg.
Pittsburgh 22, Pa.

BLAW-KNOX *Electroforged* STEEL GRATING

For more details circle NED-654 E3 on enclosed inquiry slip

How to get MORE PRODUCTION MINUTES per hour!

Don't walk—TALK with Executone Intercom!

No need to waste time shuffling back and forth for information and instructions. Just push a button and *talk!* Walking time becomes *production* time. With Executone roving employees are located instantly...telephone lines are kept open for outside calls...more work gets done *faster!* Thousands of installations prove that Executone cuts costs and increases production—*pays for itself many times over!*

Executone
INTERCOM AND VOICE PAGING SYSTEMS
Service on your premises by factory trained technicians

Get the Facts! EXECUTONE, INC., Dept. E-6
415 Lexington Ave., New York 17, N. Y.
Without obligation, send booklet describing how Executone helps cut costs. I am particularly interested in:
☐ Plant-office communication ☐ Switchboard relief
☐ Locating personnel ☐ Penetrating high noise levels
Name_____ Title_____
Firm_____
Address_____ City_____

In Canada—331 Bartlett Ave., Toronto

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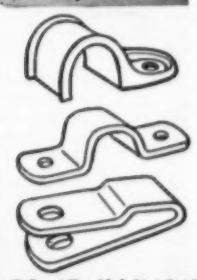
TOUGH . . . Enduring



Safer, Simpler, faster, more secure. For cables, thin-wall tubing, wires, conduits, light hose. *No shorts! No tearing! No corrosion!* Wide variety shapes, styles, sizes and materials. Write today:

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COMMERCIAL
PLASTICS CO.

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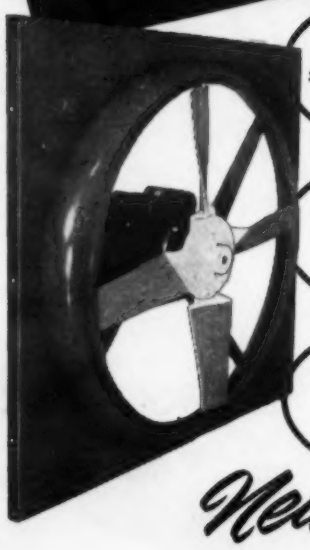
Powerful, low-cost ventilation



Easily installed square mounting panel

Totally enclosed ball-bearing motor

5400 to 36000 CFM (certified)

New

Hunter Industrial Fan

FEATURES:

- Streamlined orifice for efficient air entrance
- "Gull Wing" design—aluminum alloy blades
- Direct-drive fan for medium static pressure
- Motor permanently lubricated for life
- Automatic shutters to fit all fan sizes

Clip and mail now for complete data — Hunter

Hunter Fan & Ventilating Company
373 S. Front St., Memphis 2, Tenn.
Send complete information on Hunter Industrial Fan to:
Name_____
Address_____

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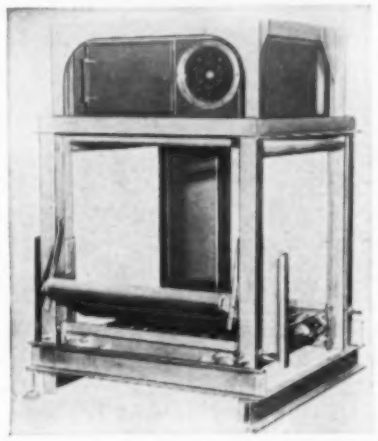
CHECKWEIGHT SCALE detects and automatically rejects off-weight packages

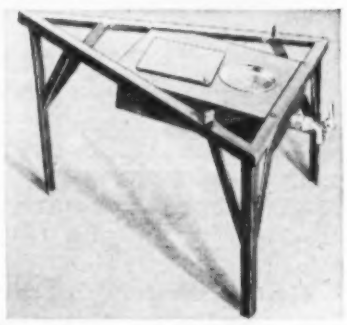


Weight of filled bags, drums and cartons is automatically indicated by model 200S checkweight scale which also separates the off-weight containers from those properly filled by utilizing a two-way conveyor belt. Unit consists of enclosed electro - mechanical weighing mechanism and motor driven conveyor belt mounted as close as 8 in. from floor. Off-weight amount is shown by dial indicator located on scale or at remote stations, or by sound or light signals.

Scale can also serve as means of controlling package filling equipment. Operators of such equipment, guided by visible trend of weights, can adjust filling scale before weight discrepancies fall outside acceptable limits. An available weight control mechanism connected electrically to scale and activated when passing package varies 2 oz or more for prescribed weight, adjusts filling scale output by 1 oz or larger preset increments. Model 200 scale with the same specifications as model 200S measures only 35 x 35 x 21 in. and has conveyor mounted on top of scale platform. Made by **Thayer Scale & Engineering Corp.,** 492 E. Water St., Rockland, Mass.

▲ For more details circle NED-659 E3 on enclosed inquiry slip ▲

OIL DRUM DRAIN STAND facilitates bottom fluid recovery



This tripod oil drum drain stand for 55-gal containers is designed to recover the several quarts of oil or other fluid which cannot be reached by a pump ordinarily used to dispense from standard drum. Drum is inverted over screened opening of stand, allowing as much as 10 qt to drain into removable reservoir. Contents can then be fed into smaller containers through faucet built into stand. Sliding cover fits over mesh opening to keep out foreign matter when stand is not in use. Lugs welded to slanted support rails prevent drum from sliding out of place. Made by **West Bend Equipment Corp.,** 220 S. Walter St., West Bend, Wis.

▲ For more details circle NED-660 E3 on enclosed inquiry slip ▲

ASK FOR YOUR FREE COPY!

IT'S JAM-PACKED WITH MONEY-SAVING IDEAS

There are dozens of ways the Zip-Lift can help you cut costs with "thru-the-air" handling. The Zip-Lift is easy to install. Hang it up on hook, jib, or trolley, and plug it in. Handles loads up to one ton. Write for Bulletin H20-1. This fully illustrated bulletin suggests many ways you can save time, effort, and money in your plant. Write today.

HARNISCHFEGER CORPORATION
MILWAUKEE 46, WISCONSIN

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Put Your "Problem Loads" Here

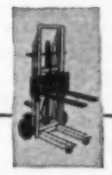
*BIG JOE

BATTERY OPERATED Hydraulic LIFTS

Provide effortless lifting of 1000-lb. loads as high as 80" and easy movement between tailgate, shelf, machine or tier. Forks optional. Prices from

$587.50
f o b Chicago.

MANUAL MODELS
Tool Capacity 750 lbs. Prices from $236.50



Distributors in Principal Cities

Write for Specifications on All Models.

*T. M. REG. IN U. S. PAT. OFF.

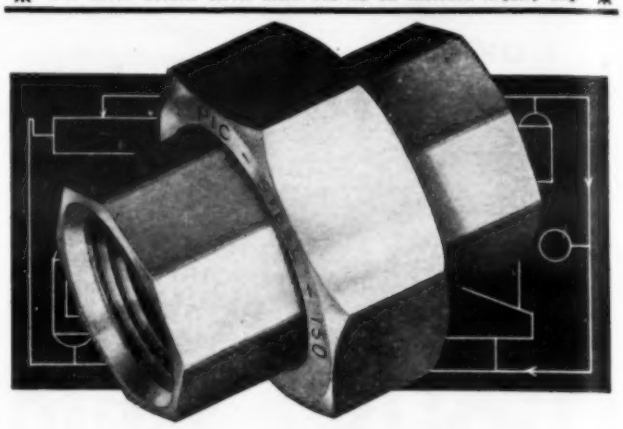
Cable Address: Big Joe

BIG JOE MANUFACTURING COMPANY
908 W. Jackson Blvd. • Chicago 7, Illinois

Let BIG JOE do it!

See us at The Materials Handling Exposition, Booth 1434, Philadelphia, May 18-22

▲ For more details circle NED-662 E3 on enclosed inquiry slip ▲



Pics fit your new Equipment PICture!

Yes, their eye-catching brightness and strength make these 150 lb. steel unions the choice for original equipment. They go on fast, too, because ends are uniformly flat-sided to accommodate open end wrenches. You can't hurt the steel pipe coupling stock either. Special wedge-type bronze seat for tight seal. Complete zinc plating, even on threads combats rust. Pics cost *less* than a galvanized, *no more* than a black malleable union.

Write for Samples
DART UNION COMPANY
132 THURBERS AVENUE, PROVIDENCE 5, R. I.

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for *EVERY SIZE* in your line . . .

. . . the same spruce appearance—when you design with Hackney Deep Drawn Shapes and Shells. And good looks are just one of the many advantages of using Hackney parts for your products.

You can cut dead weight with them, too—or add extra durability and resistance to shock and vibration. And the chances are good you'll wind up with a lower cost per unit.

Write today! Let our more than 50 years' experience help you add new sales appeal.

PRESSED STEEL TANK COMPANY
Manufacturer of Hackney Products
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Hackney

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

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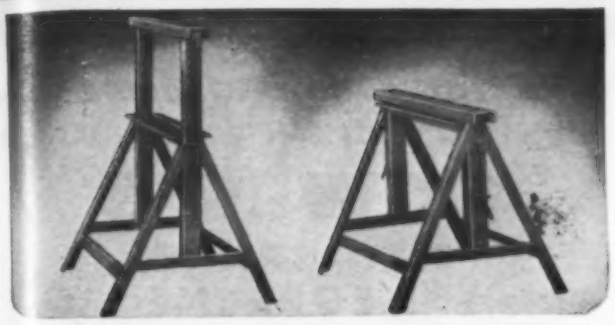


EVERY PLANT CAN USE ADJUSTABLE STEEL HORSES

They are the "work horses" in every plant or shop . . . more than pay for themselves, and are never idle because of the many uses their ready adjustability will easily serve:

SPOT WELDING TABLES	SCAFFOLDING
FABRICATION SUPPORTS	CONVEYOR SUPPORTS
LAYOUT WORK	MAINTENANCE WORK
BENCHES	And many other uses

MODELS FOR HEAVY OR LIGHT WORK

Standard length 36". Low Height 24"; Extended Height 42". Adjustable at 1½" intervals. Held in position by steel lock pins. All units portable. Painted one coat chrome yellow.

Send today for BULLETIN No. 500 covering BRUSCO Boxes and Hoppers.

Brusco HANDLING EQUIPMENT

BRUMMELER STEEL PRODUCTS CORPORATION

1411 Ionia Ave., S. W. Grand Rapids, Michigan

▲ For more details circle **NED-665 E3** on enclosed inquiry slip ▲

EASIER LIQUID LEVEL READINGS WITH IMPROVED WIDE VISION REMOTE INDICATOR

A new-type face on the Yarway Remote Liquid Level Indicator now permits side as well as head-on dial readings.

This improved visibility makes it possible to check boiler water levels from most any position in the control room, or wherever the Yarway Remote Indicator may be installed.

The Yarway Indicator is a manometric type with automatic temperature compensation. Level readings are instant and accurate because the indicator is operated by the boiler water itself. Indicating mechanism is never under pressure. There are no stuffing boxes.

Over 8,000 Yarway Remote Liquid Level Indicators are successfully operating throughout industry—primarily for indicating boiler water levels, but also for many other liquid level applications, and for superheater pressure differential indicators aboard ship.

Write for free Yarway Indicator Bulletin WG-1823.

YARNALL-WARING COMPANY
131 Mermaid Ave., Philadelphia 18, Pa.

YARWAY *remote liquid level indicators*

▲ For more details circle **NED-666 E3** on enclosed inquiry slip ▲

HIGH MAGNIFICATION AIR GAGE has large dial, uses standard plugs

Having magnification of 10,000 to one, this Air-O-Limit model G gage uses long wearing standard gaging plugs and has a 5-in. dial. Two scales are available, one where each division is 10 millionths, the other where each division is 20 millionths. The meter is of the high speed liquid filled Bourdon type. Hand gage attachments are available, and Jacobs chuck plug adaptor, a self-contained stand, adjustable restriction unit and mullmatic regulator are standard. Made by **Niles-Bement-Pond Co.**, Pratt & Whitney Div., 20 Charter Oak Blvd., West Hartford 1, Conn.

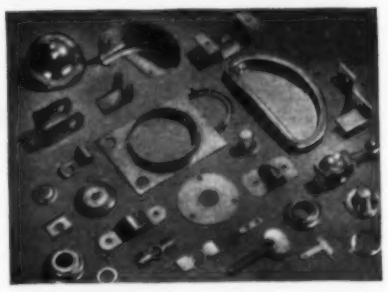
▲ For more details circle **NED-667 E3** on enclosed inquiry slip ▲

DUSTING CLOTH use when applying high finishes

Chemically treated Dustix cheese cloth remains permanently tacky and is designed for precleaning metal or wood when high grade finishes are required. This cloth picks up all solid contaminates, no matter how small and is specially useful for use in finishing automobilies, furniture, and other appliances. It will not ignite spontaneously. Made by **Modern First Aid Necessities Co.**, Industrial Div., Dept. NED, 737 W. Randolph St., Chicago 6, Ill.

▲ For more details circle **NED-668 E3** on enclosed inquiry slip ▲

WASHERS, STAMPINGS & PUNCHINGS many "specials" offered as standard



Because of large number of stock dies, this company is able to offer as standard many "special" types of washers, stampings and punchings. For unusual needs, special dies can be made to specifications. Products are made from steel, brass, aluminum, stainless steel, bronze and other alloys. They include finish, tension, C and other washers; hangers, clips, lugs, pans, brackets, bezels, flanges, ferrules, eyelets and others, as shown in illustration. Made by **American Washer & Stamping Co.**, Dept. A, 308 W. Erie St., Chicago 10, Ill.

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Also standard metallic impact types . . . wide selection of piston diameter sizes.

LITERATURE ON REQUEST

THE CLEVELAND VIBRATOR COMPANY
2736 Clinton Avenue • Cleveland 13, Ohio

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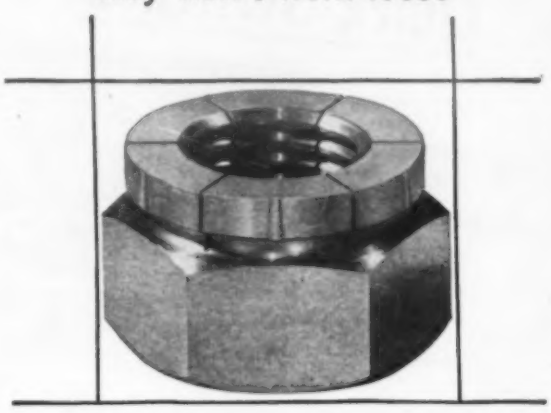
they won't work loose



FLEXLOC Self-Locking Nuts lock and stay tight, no matter how severe the vibration. Yet they can be easily removed and reused repeatedly. They are stop nuts too; they stay put in any position on a bolt when the locking threads are fully engaged. And FLEXLOCS are one piece, all metal—nothing to assemble, come apart, lose or forget. See your local industrial distributor for literature and samples or write SPS, Jenkintown 24, Pa.

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FLEXLOC LOCKNUT DIVISION

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Here at last is a new low-priced Nameplate Press that will pay for itself quickly and many times over.

Now you can stamp neat, perfectly aligned letters and figures on all types of identification plates with this new, easy-to-operate Nameplate Press: MACHINERY DETAIL PLATES KEYS — TAGS — CHECKS IDENTIFICATION PANELS and scores of other identification purposes.

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Write, call or wire today for complete information and price.

PERMANENT IDENTIFICATION—It is often hard to keep tab on various pieces of equipment because of inadequate or temporary methods of identification marking. A solution to this dilemma may be the metal stamping machine illustrated.

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P-306-CCT Plug, Cable Clamp in Cap.

Jones Series 300 illustrated. Small Plugs & Sockets for 1001 Uses. Cap or panel mounting.

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- Knife-switch socket contacts phosphor bronze, cadmium plated.
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- Insulation molded bakelite.
- All Plugs and Sockets polarized.
- Metal Caps, with formed fibre linings.
- Made in two to 33 contacts.
- For 45 volts, 5 amperes. Efficient at much higher ratings where circuit characteristics permit.

Ask for Jones Catalog No. 17 showing complete line of Electrical Connecting Devices, Plugs, Sockets, Terminal Strips. Write or wire today.

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CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

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Specialty

And the "specialty of the house" is double-barreled . . . first, choose from hundreds of standard units to satisfy your needs—for quick switch delivery . . . second, Daven can effect quick 'switches' or changes from standard units to special switches, by using components at hand. That, too, makes for speed, dependability, economy. Write for more detailed data.

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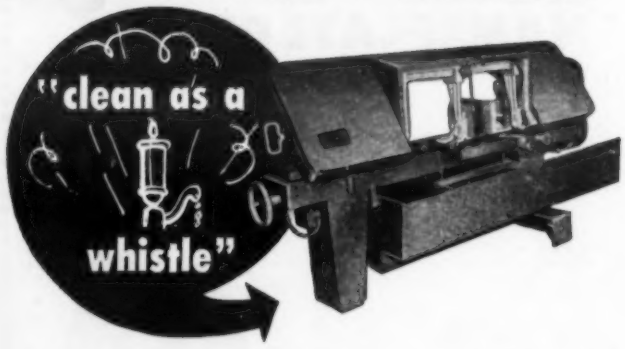
NOW...CUT METAL



That's right. There's no burr and kerf is held to a bare minimum when cutting with a Kalamazoo Metal Cutting Band Saw! What's more, accuracy of a few thousandths can be maintained in cutting bars, rounds, angles and odd shapes.

Remember, for continuous or intermittent production cutting at *lowest cost . . . a Kalamazoo can't be beat!* Three sizes are available, all can be had with casters for complete portability. Before you specify any metal cutting band saw . . . investigate what Kalamazoo offers!

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Kalamazoo TANK and SILO CO.

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This **Bond** 40-A-MH Caster

Is Your Best Buy

for HEAVY DUTY SERVICE

40-A-MH Series—Structural Steel Swivel Casters equipped with Roller Bearing Semi-Steel Wheels.

Visit Bond at Booth 805 Materials Handling Expo. May 18-22, Philadelphia

Ask your industrial distributor...

he knows that Bond 40-A-MH Series Casters are the right casters for handling heavy loads—easily! Hardened double ball races that absorb side shock and vertical load are pressure lubricated for frictionless running.

All Bond 40-A Series Casters, including the 40-A (medium duty); 40-A-MH (heavy duty); 40-A-H (extra heavy duty), are "workhorse" casters. They are available in 5 wheel types; in wheel diameters from 4 to 10 inches; load ratings up to 4500 pounds.

Remember, *your best buy is Bond*—and your distributor is always interested in helping you select the right Bond Casters for your work. Ask him too, for a copy of Bond Catalog K-38 or write direct.

41-A-MH Series—Structural Steel Rigid Casters are companion casters to the Bond 40-A-MH Series.

BOND FOUNDRY & MACHINE CO.
Manheim, Penna.

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OSCILLATOR & NULL DETECTOR
both instruments plug directly into a unit power supply

Type 1212-A unit null detector, designed primarily as a balance indicator for alternating current bridges, is also useful as a sensitive wide frequency range voltage indicator. Frequency characteristic is flat within about 1 decibel from 50 cycles to 500 kilocycles and use can be as an indicator at frequencies from 20 cycles to 5 megacycles. Full scale deflection is about 100 v, while a signal of less than 40 microvolts deflects the meter by 1 per cent of full scale.

Type 1215-A unit oscillator (illustrated), like the null detector, is made to plug directly into the type 1203-A unit power supply. It produces frequencies from 50 to 250 megacycles over a single continuous range. Tuned circuit is semibutterfly type. Readings are directly from a 6-in. dial with a calibrated slow motion drive. At least 80 milliwatts can be delivered at any frequency into a 50-ohm load. Made by **General Radio Co.**, Massachusetts Ave. & Front St., Cambridge 39, Mass.

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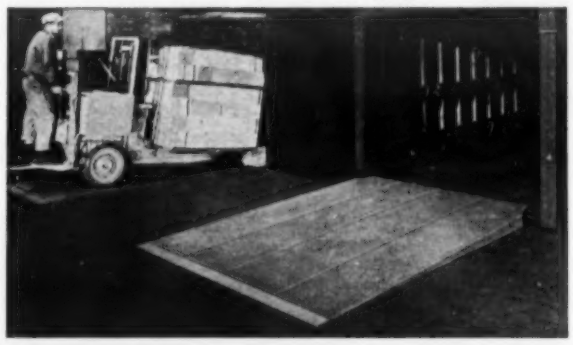
LOADING RAMP
bridges gap between truck and dock

Four-way compensation for out-of-level variances and spring deflections during loading or unloading is provided by the Leva-Dock, a hydraulically operated loading ramp. Adjustment to truck and trailer beds of varying heights is automatic. A built-in safety device locks the ramp in position in case of sudden vehicle movement. Torque-frame construction carries the motor and equipment on the torque bar for easy access for maintenance. The control switch is a separate unit and can be located in any convenient place. Unit is locked into position when not in use to become an integral part of the whole loading platform. It can take a load up to 20,000 lb rolled in any direction. Made by **Rotary Lift Co.**, 1011 Kansas St., Memphis 2, Tenn.



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Hundreds of PROFITABLE USES for—

Use these versatile flexible shaft tools

for all kinds of shop work including die sinking, polishing, reaming, grinding and similar jobs. They're quickly and easily coupled to any electric motor with 3/8" or 1/2" diameter spindles.

They come in two sizes. The 700 Series for precise, delicate work use .092" shank diameter tools. The 500 Series for heavy duty service use tools with shank diameters up to 1/4".

WRITE FOR THIS CATALOG. CATALOG T-51 describes Flexarms and many other S. S. White tools for industry. Send for your copy today.

THE **S.S.White** INDUSTRIAL DIVISION
DENTAL MFG. CO. Dept. 7, 10 East 40th St. NEW YORK 16, N. Y.

WESTERN DISTRICT OFFICE: Times Building, Long Beach, California

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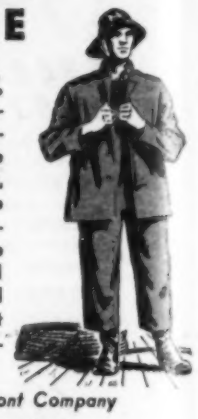
These sturdy, durable, 100% DuPont **NEOPRENE** garments give that extra service to those who require protection from greases, oils, and most acids. There is a TOWER protective garment especially adaptable for every type of industrial activity. We will be glad to recommend the garment which best meets your individual requirements.



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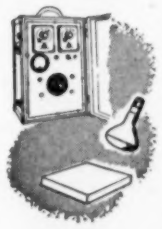
Complete Line of *FASTAX* High-Speed MOTION PICTURE CAMERAS

8mm, 16mm, 35mm half frame and full frame FASTAX cameras with speed ranges up to 16,000 frames a second are available. In addition there are Streak, Continuous Oscilloscopic 16mm and 35mm cameras and Combined Motion Picture and Streak 35mm cameras with no superimposed images.



COMPLETE *FASTAX* HIGH-SPEED PHOTOGRAPHIC LABORATORY

Cameras, lenses, lights, control equipment, exposure meter, film, tripods, clamps . . . in short Wollensak can supply everything you need for a high-speed laboratory.

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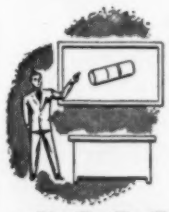

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Wollensak offers free courses in the use of High-Speed Photography. Dates may be obtained by writing John H. Waddell, Manager, Technical & Photographic Division, Wollensak Optical Company.

WOLLENSAK *FASTAX* GUARANTEE

We believe high-speed motion picture photography is an indispensable tool of industrial design and research engineers. We know FASTAX is in demand in every field where actions or reactions are faster than the eye can see. That is why we guarantee a FASTAX high-speed photographic laboratory will give results.

Wollensak OPTICAL COMPANY Rochester 21, N. Y.

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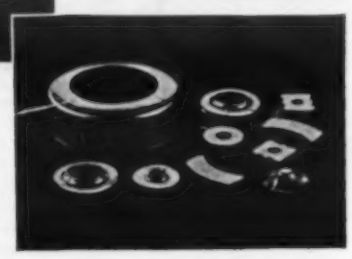

on Insulators, Washers and Small Parts Plastic-Fabricated by SILLCOCKS-MILLER

Sillcocks-Miller engineers now enable you to get small plastic parts, such as insulators, washers, etc. through a special fabricating process that saves the cost of molds.

The development of this process has opened the possibility of fabricating thin wall pieces such as insulators, etc., and offers economy without sacrifice of quality or service life.

You are invited to submit your specifications on small parts of this type for recommendation.

The SILLCOCKS-MILLER Company
Pioneers in Plastic Fabrication since 1910

30 West Parker Avenue • Maplewood, N. J.

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FLEXAUST* HOSE CUTS COST 5 WAYS

Highly Flexible Airtight Ducting ... For Moving Air, Gases, Materials Via Pressure, Suction, Gravity

NEW CATALOG No. 35 SHOWS HOW FLEXAUST HOSE:

- **Saves labor** because Flexaust hose bends sharply without kinking or flattening, is easy to install.
- **Assures long life** with its excellent resistance to moisture, acids, abrasion.
- **Gives trouble-free service** because of its spiral-wire reinforced, double-ply construction and Neoprene coating.
- **Has many applications** in virtually every industry.
- **Custom-made accessories** are produced for unusual or special applications.

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Sizes: 1¼" ID to 28" ID
Varied types, coatings and fittings

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Dept. NE-5 • 100 Park Avenue
New York 17, N. Y.

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ACROMARK MEANS "ACCURATE MARKING"

FILL DESIGN AND LETTERING WITH ENAMEL MECHANICALLY

ASK FOR— THE **ACROPRINTER** Reg. U. S. Pat. Off.

MADE IN SEVERAL SIZES

MANUALLY OR POWER OPERATED

CONSTANTLY IMPROVED

The ACROMARK Company

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"THE ORIGINAL MARKING SPECIALISTS"

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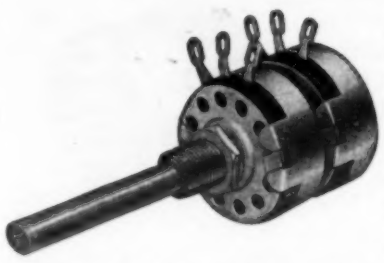
WIRE & CASINGS made to any size and length

Originally supplied for choke control assemblies in the marine field, Bowden casings and wire are now available to industry. They are made of rust resistant, hard - drawn spring tempered wire in hot zinc plated steel, brass or bronze casing. Plated steel casings are available in ¼ and 3/16-in. sizes, while brass and bronze types are made in ¼-in. size. Casings are classified as bulk, which means 1000 ft or over of one type with inner wire in one continuous length, or "cut to length," which includes from 5 to 100-ft lengths with individual inner wire. Either right or left hand wind can be supplied. Made by **Lee Healey Co.**, Dept. 200, 554 W. Garfield, Glendale 4, Calif.

For more details circle NED-685 E3 on enclosed inquiry slip

TANDEM-MOUNTED POTENTIOMETERS controlled by single shaft rotation

Mounted in tandem and controlled by the rotation of a single shaft, dual type AB potentiometers have molded composition case, are designed for high reliability use, and are available in linear curve type. Seven resistance values are available ranging from 10,000 ohms to 1.0 megohm. Units have a 2-in. long, round shaft and independent electrical connections. Made by **Ohmite Mfg. Co.**, 4843 W. Flournoy St., Chicago 44, Ill.



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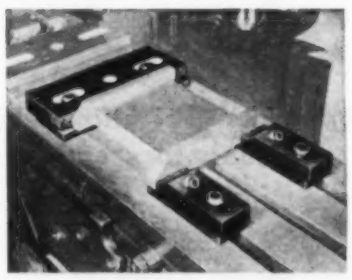
MACHINE TOOL CLAMP for rapid loading and unloading



Accurate set-ups and rapid loading and unloading of jig borers, millers, planers and shapers are attributes of the J & S Double ½ Vise. Hinged spring-loaded jaw provides positive hold-down action. Loading and unloading is by loosening one adjusting screw on the opposing clamp. Vise is used with J & S Jaw Clamps and holds the workpiece against the table with a parallel force from ½ to 3 tons. Made of oil-hardened tool steel by **J & S Tool Co.**, 700 W. Mt. Pleasant Ave., Livingston, N. J.

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ENAMELSTRIP

STEEL • ALUMINUM • BRASS • PRE-FINISHED COLOR COIL

assures a **perfect finish before fabricating**

You can easily cut production time and cost with Enamelstrip, the continuous-feed, precolored metal coil. Leading manufacturers of metal products are using it with outstanding results in a wide variety of items. Enamelstrip's exclusive, flexible finish withstands the stresses of drawing, bending and forming without cracking or peeling. Many companies have entirely eliminated their finishing departments! Any metal in any finish will be coated and slit to your own specifications.

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Improved EC&M LINE-ARC CONTACTORS

Encourage Maintenance

FRONT AND REAR CONTACTS REPLACEABLE IN LESS THAN 2 MINUTES

The LINE-ARC principle gives long contact-life, but when necessary, contacts are easily accessible for quick renewal—no other parts need be removed first. And a standard wrench permits good leverage for loosening and tightening operations. *It pays to encourage maintenance.*

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Materials Handling

FOR THE METAL WORKING INDUSTRY

CHIP-TOTE conveyors increase machine tool production by continuously removing chips, turnings and borings. There's no need to shut down productive machinery for manual scrap removal — CHIP-TOTES do the job automatically while the machines are operating. Write for Bulletin MF-640.

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1023-MF

MAY-FRAN ENGINEERING, INC.
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Gentlemen: Please send me, without obligation,

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STREET _____
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LOOK! A SELF-CLINCHER!

No blade to insert!
Staple spreads itself under or inside the work!

Bostitch T5 Tacker → with outward clinch

Use it for stapling insulation around pipes and ducts ... fastening shipping tags to corrugated containers ... any job that calls for a blind clinch. By lightly pressing the handle you automatically drive a staple and turn its legs outward to clinch under or inside the work. Two models for light and medium staples. Call the Bostitch economy man in your area.

BOSTITCH AND FASTER fastens it better with wire

For more information about the Bostitch T5 Tacker with outward clinch, write BOSTITCH, 685 Mechanic St., Westerly, R. I.

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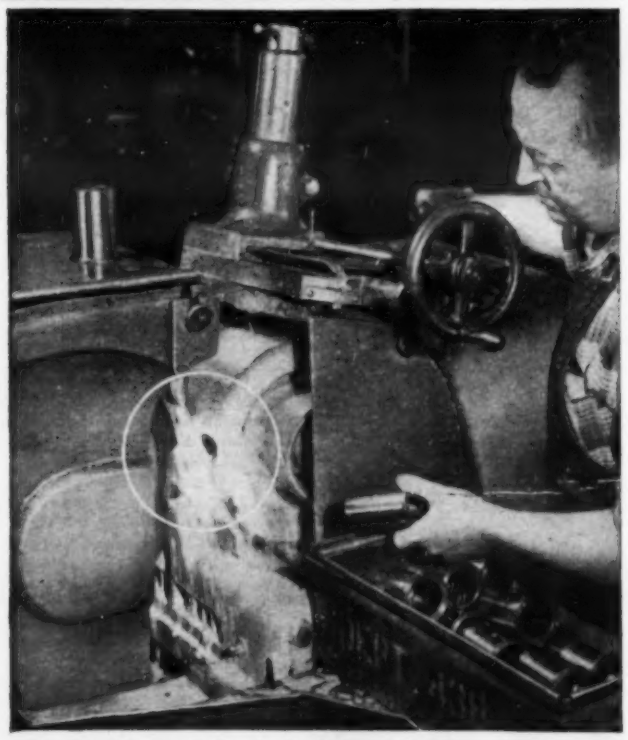

ASK HIM! Norton G Bond wheels have already made plenty of friends in plants everywhere. How about getting *your* shopmen's reaction to the "Touch of Gold"?

Boost your profits with the NEW

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for your latest Norton value-adding "TOUCH OF GOLD"

You'll find that ALUNDUM* grinding wheels made with Norton's new vitrified G Bond cut freer, cooler and faster, hold corners better, are better for form grinding and produce a smoother finish. They dress easier, cover a wider range of jobs and do more work per wheel.

That's because the new G Bond holds abrasive grains *just long enough* to do the most effective cutting job, then releases them to make way for new grains with fresh, sharp cutting edges. This keeps the wheel's grinding surface at constant peak efficiency — the "Touch of Gold" that adds more profits to your precision and semi-precision grinding jobs.

ASK YOUR NORTON DISTRIBUTOR about arranging a try-out in your plant. Or write to NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Mass.

NORTON ABRASIVES

Making better products to make other products better

W-1483 *Trade-Mark Reg. U. S. Pat. Off. and Foreign Countries

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LOAD HANDLING TONGS
grip and release automatically

Locked open as they are lowered over the burden, these tongs close as they are raised, and grip firmly while the load is carried to its destination. When the load is delivered and resting on a firm surface, the tongs are lowered an additional few inches, which causes them to lock open again, ready for the next load. One man using the control panel of the overhead crane is able to direct the entire operation. Use of the tongs permits high tiering of boxes, and eliminates the need for wide aisles, saving valuable storage space. Made by the **Heppenstall Co.**, 4621 Hatfield St., Pittsburgh 1, Pa.

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POTENTIOMETER
has low operating noise level

Spiralpot slide-wire multi-turn potentiometer is offered in precision grades of plus or minus 0.05 and 0.025 per cent linearity, with both independent and zero-based linearity ratings and closer rotational tolerances of plus 1 degree, minus 0 degree. Model 8517-A unit features infinite resolution, low operating noise level, starting torque of 0.6-oz-in., minimum inertia effects and life of 1 million cycles (equivalent to 20 million revolutions in a 10-turn unit). It will operate in a temperature range from minus 55 to 71° C with rotational shaft speeds up to 500 rpm. Aluminum case diameter is 1.75 in. Made by **G. M. Giannini & Co.**, 590 S. Fair Oaks Ave., Pasadena 1, Calif.

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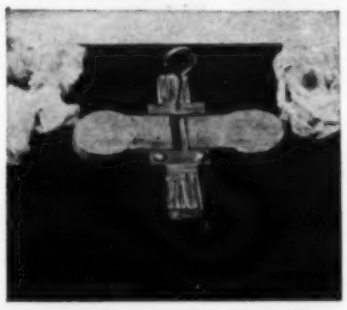
BATTERY REPAIR MOLD
connectors spliced on the job



After the intercell connectors have been sawed, battery elements removed for repair and the repaired cell replaced in its rubber jar, this splicing mold permits simple reconstruction of the sawed connector in its original form. The mold consists of a simple plate with two side blocks, one fixed and the other movable. The two sawed ends of the connector are chamfered to provide puddling space. After the movable block of the mold is brought in contact with the connector, a lead-burning electrode is used to re-form the joint. Made by **Gould-National Batteries, Inc.**, 465 Calhoun St., Trenton, N. J.

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WATTMETER
electronic type with wide range

Basically an amplifier driving the potential coil of a dynamometer wattmeter, model 110 electronic wattmeter has a range from 0.3 to 300 w on six scales, with accessory shunts extending the range to 9000 w. Frequency response of 20 to 3000 cycles permits measurements at all power and aircraft frequencies with no need for corrections of any kind. Accuracy is within 2 per cent of full scale. Input impedance is 500,000 ohms to the potential circuit, 0.5-ohm to the current circuit. Uses include transformer core loss tests, measuring power to fuses, fusible links, fluorescent lamps and ballasts. Made by **Keithley Instruments**, 3870 Carnegie Ave., Cleveland 15, O.

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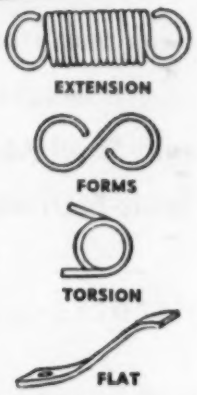
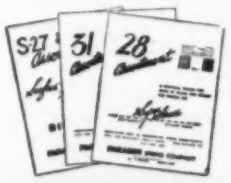
QUALITY CONSCIOUS SPRING BUYERS CHOOSE

PARAGON SPRINGS

Springs from Paragon are good springs . . . because of our complete control during manufacture. Our customers know that even commercial springs are better from Paragon . . . at no extra cost. Whatever your requirements . . . Precision or Commercial . . . your orders and inquiries receive expert individual attention.





SEND SPECS FOR QUOTATION

Write for STOCK SPRING DATA SHEETS giving complete specs, loading and design information.

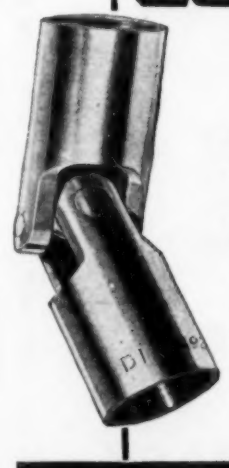
PARAGON SPRING COMPANY
4619 W. Fulton St. • Chicago 44, Ill.

▲ For more details circle NED-698 E3 on enclosed inquiry slip ▲

▲ For more details circle NED-699 E3 on enclosed inquiry slip ▲

6 GOOD REASONS FOR CHOOSING. . .

LOVEJOY UNIVERSAL JOINTS



- ★ Concentricity guaranteed to .001.
- ★ Rivets ground flush with body for close quarter work.
- ★ Greater angle of operation with maximum bearing surface and strength.
- ★ No binding, backlash or inplay of pins.
- ★ Highest grade, heat-treated alloy steel.
- ★ Exceed Armed Forces rigid requirements.

Available in 13 sizes. Diameters ½" to 4". Lengths 2" to 10⅝".

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LOVEJOY FLEXIBLE COUPLING CO.
5003 W. Lake Street, Chicago 44, Illinois
Also Mfrs. Lovejoy Flexible Couplings and Lovejoy Variable Speed Transmissions

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Economical Heat for
Preheating Fuel Oil
Superheating Steam
Heating Compressed Air

CHROMALOX
Electric
CIRCULATION HEATERS

DEPENDABLE, EFFICIENT, EASY-TO-USE

Production costs go down . . . operating efficiency up, when you install CHROMALOX Electric Circulation Heaters. They give you measured quantities of heat at temperatures up to 750° F that can be rapidly reached and accurately controlled. Dependable, around-the-clock operation with minimum maintenance. Wide selection to meet your specific heat requirements.

FOR MORE KNOW HOW

Write for Catalog 50 that tells the full story.

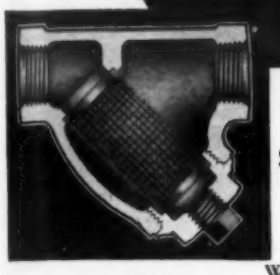
EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

See other ad on page 4

CHROMALOX
ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-701 E3 on enclosed inquiry slip

don't let dirt damage your piping!



CRANE SEDIMENT SEPARATORS COST SO LITTLE

Iron Body and Cast Steel

Working Pressures

Up to 600 pounds steam. Iron patterns in sizes up to 12-in. Steel patterns to 1½-in. Screwed or Flanged Ends.

Why take chances with valuable and sensitive flow control equipment? Put Crane Sediment Separators in your pipe lines and be sure dirt, grit and scale can't do damage.

Simple in design; rugged in construction. Have extra large screening area assuring free fluid flow with minimum pressure loss. Effectively trap all foreign matter. Periodic blowing out is only maintenance required. Get full details from your Crane Catalog or call your Crane Representative.

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

CRANE *Everything for Every Piping System*

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

For more details circle NED-702 E3 on enclosed inquiry slip

A. E. C. GENERATOR insulated by

BIGGEST MYKROY MOLDINGS ever made

Now it can be told! The Atomic Energy Commission chose MYKROY *above all other materials* to insulate its generator. The 4-ft. diameter of the rings was only one of many reasons.

CHECK THESE FEATURES

- can be machined or molded to closest tolerances
- lightweight—with the mechanical strength of cast-iron
- high dielectric and flashover properties
- won't warp; keeps its shape
- low-loss factor at sub-zero or 1000° F.

Let MYKROY, the perfect glass bonded mica, solve your insulating problems. Sheets and rods . . . machined or molded to specifications. May we quote on your requirements? Write today for MYKROY Brochure #203.

Made exclusively by

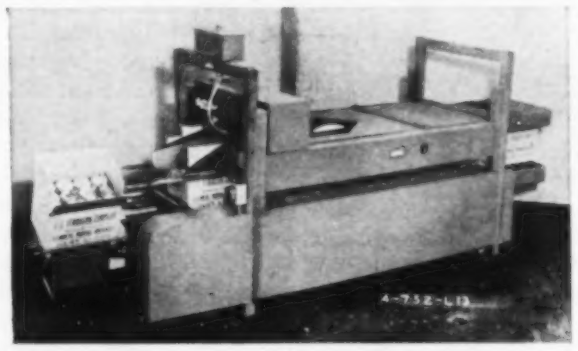
ELECTRONIC MECHANICS INC.
101 CLIFTON BOULEVARD, CLIFTON, NEW JERSEY
MYKROY, INC., WHEELING, ILL.

See us at Booth # 4-610, Radio Engineering Show

For more details circle NED-703 E3 on enclosed inquiry slip

CARTON GLUING MACHINE applies glue in spot pattern

All types of paper cases and cartons can be glued and sealed by the Packomatic packer-gluer. It applies glue in spot pattern on ¾-in. centers for fast



drying and glue economy. Feed is by gravity to brass applicators from the stainless steel glue supply tank. Machine weighs 1150 lb, occupies less than 30 sq ft of floor area and can be mounted on casters, if desired. Glue can be applied in a variety of spot patterns on eight 12-in. long or four 24-in. long cases per minute. Once the operator moves the case forward to contact a starting trip, operation of the sealer is automatic. Made by **J. L. Ferguson Co.**, 34 Republic Ave., Joliet, Ill.

For more details circle NED-704 E3 on enclosed inquiry slip

HEAT TREAT FURNACE LOADER discharges in metered quantities

Measuring only 10 ft high by 8 ft long, improved Man-O-Steel heat treat furnace loader automatically removes material from hopper and discharges it in even and metered quantities into endless belt heat treat furnace. Series of submerged, synchronized, vertical-moving pushers, cut on 30-degree angles, remove parts from hopper, raise them to next level and causes them to roll off by gravity. Material continues to be elevated in this way until discharged into furnace. One man can load from 500 to 4000 lb per hour of small stamping, forging or castings. Loader is furnished with drive, variable speed controls, overload safety clutch, reversing starters and pushbutton controls. Made by **Michigan Crane & Conveyor Co.**, 118 N. McKinstry Ave., Detroit 9, Mich.

For more details circle NED-705 E3 on enclosed inquiry slip

⅓ HP GE MOTOR only $37.50 complete

WHIRLPOOL MIXERS

Stainless Steel
Propellor and Shaft
Adjustable Clamp
Heavy Rubber Cord and Plug

Pays for itself in less than a week!

STANDARD ELECTRIC MANUFACTURING CO., INC.
WEST BERLIN 28, NEW JERSEY, U.S.A.

For more details circle NED-706 E3 on enclosed inquiry slip

Complete Portable Steel Strapping Kit

New Acme Steel "Pony Pack" is lightweight, complete with tools for fast, low-cost strapping

Here's a handy, portable strapping outfit for fastening, re-coopering, securing, or reinforcing anything, anytime, anywhere.

It's Acme Steel's new "Pony Pack." Weighs about 20 pounds. Metal carrier contains 300-foot coil of Acme Steel Strapping, a stretching tool, sealing tool, seals and snips. For details, write Acme Steel Products Division, Dept. NED-53, ACME STEEL COMPANY, 2840 Archer Ave., Chicago 8, Ill.

STRAP IT...STITCH IT...SHIP IT...SAFELY! ACME STEEL

For more details circle NED-707 E3 on enclosed inquiry slip

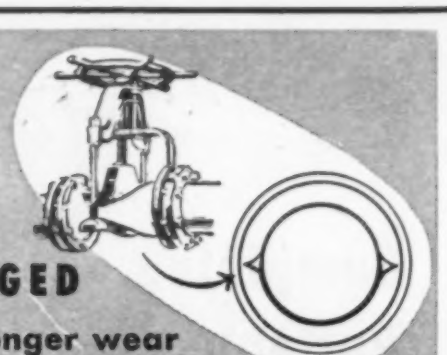
THERE'S A STURDY BURKE FOR EVERY PURPOSE

Thousands of efficient, low cost Burke Bench Millers are proving their superiority in Tool, Development and School Shops and a wide variety of mass production operations.

Send for complete data on models attachments, accessories and suggestions for putting Burke's to work for your profit.

THE U. S.-BURKE MACHINE TOOL DIV.
Brotherton Road 2, Cincinnati 27, Ohio

For more details circle NED-708 E3 on enclosed inquiry slip



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*HINGED
for longer wear

MASSCO-GRIGSBY

RUBBER PINCH VALVES

For abrasive pulps and corrosive liquids
SIZES 1" to 12" DIA.

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The Mine & Smelter Supply Co.
DENVER 17, COLORADO

*PATENTED

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REMEMBER, MERLIN, WAND WAVING IS STRICTLY HOCUS POCUS!

No, not even a magician can make good on the fantastic claims attributed to cheaper solders, *the mystery alloys with a secret ingredient*, that are supposed to equal the performance of higher tin content solders. What really counts is the quality of the soldered connection . . . something you can always maintain with Kester Solder!

FREE! *Kester Technical Manual, "SOLDER and Soldering Technique." Write today for your copy!*

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SOLDER COMPANY
4249 Wrightwood Avenue • Chicago 39, Illinois
Newark 5, New Jersey • Brantford, Canada

For more details circle NED-710 E3 on enclosed inquiry slip

STA-WARM WRAPS AN ELECTRIC BLANKET OF HEAT Around Each Compound Melter

Typical 150 gal. Sta-Warm compound melter showing application of one mile of heating unit having low heat concentration per square inch.

● Many feet of closely spaced, specially wound resistance wire blanket the sidewalls and bottom of each Sta-Warm compound and soft metal melter. This basic Sta-Warm design provides uniform heat at low watts-per-square-inch to thoroughly heat entire contents of the tank without leaving any cold lumps to slow down production.

Heat is applied in multiple circuits as shown at left. Control devices include pyrometers or thermostats with magnetic contactors. Designed with or without agitators.

Whatever your resin or compound melting problem, there's a Sta-Warm melter to meet your needs.

Why not inquire for specific information today?

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

For more details circle NED-711 E3 on enclosed inquiry slip

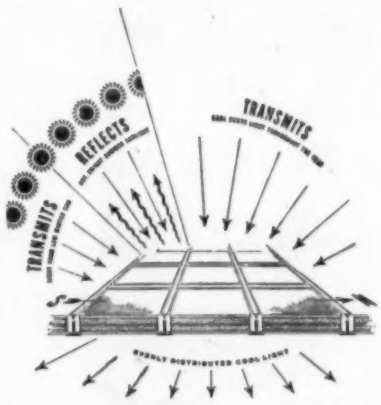
IMPACT TOOL ADAPTERS for nuts from 3/16 to 3½ in.

Line of power-impact sockets, extensions, adapters and drivers is available for use with Ingersoll Rand, Chicago Pneumatic, Independent Pneumatic or any other standard air or electrically powered tool. Sockets are offered in square or hexagonal openings for nut sizes ranging from 3/16 to 3½ in. having drive sizes from ¼ to 1½ in. Both standard and deep lengths are made, as are extensions in ¼ to 1½-in. drive sizes in a wide range of standard lengths. Adapters permit interchanging of sockets with other drive sizes of impact power tools. Special tools can be supplied. All are made from solid bars of chrome molybdenum steel, hot broached and heat treated. Sockets are also available for driving of case hardened hex head self-tapping sheet metal screws. Made by **Cornwell Quality Tools Co.**, 1040 Cleveland Ave., Mogadore, O.

For more details circle NED-712 E3 on enclosed inquiry slip

GLASS SKYLIGHTING UNITS feature Fiberglas center sheet to augment vacuum insulation effect

Two pieces of pressed glass hermetically sealed together with Fiberglas sheet between form Kimble Toplite System skylighting units. Prisms on inside of top glass transmit an amount of daylight and solar heat which depends upon location of sun. Second glass distributes light to area below. Fiberglas sheet 0.002-in. thick softens transmitted light and augments the vacuum insulation effect.



In summer months, glass prisms reflect skyward up to 53 per cent of direct sunlight, while in winter, with sun in its lowest position, unit transmits more light and solar heat. Installation is oriented north and south for transmission of high volume of northern light throughout year. Units measure 10⅝ in. square by 3 in. thick. Completed panels weigh 16 lb per sq ft and are made in 3 x 3, 4 x 4, 4 x 5 and 3 x 6 ft sizes. Tar and sulphur compound over structural ribs makes them completely weatherproof. Made by **Kimble Glass Co.**, Dept. E, Ninth Floor, Ohio Bldg., Toledo 1, O.

For more details circle NED-713 E3 on enclosed inquiry slip

SLASH PRODUCTION COSTS!
and SAVE MATERIAL
WITH RELIANCE SNAP RINGS

AVAILABLE IN VARIOUS CROSS SECTIONS OR END CUTS

SEND TODAY FOR FREE ENGINEERING BULLETIN 4K/3

RELIANCE DIVISION
EATON MANUFACTURING COMPANY
OFFICES AND PLANTS • MASSILLON, OHIO
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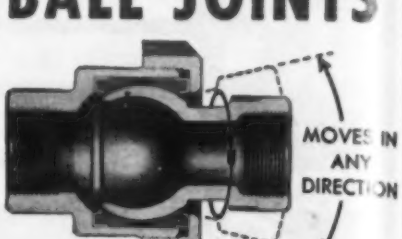
BARCO Flexible BALL JOINTS

—when you need movable joints in piping handling STEAM, OIL, CHEMICALS



Send for New Bulletin No. 215

- Provides for movement in piping up to 40° side flexibility, plus 360° rotating movement.
- Stainless steel and chemically inert gaskets for strong chemicals. No metal-to-metal contact. Choice of body materials.
- One Barco Ball Joint does the work of two or more ordinary swivel joints because "it moves in any direction!"
- Many models available. For pressures to 6,000 psi; temperatures to 1000° F. 15 different sizes, ¼" to 12". *Ask for recommendations.* BARCO MFG. CO., 530F Hough St., Barrington, Ill.

THE ONLY TRULY COMPLETE LINE OF FLEXIBLE BALL, SWIVEL, SWING AND REVOLVING JOINTS

For more details circle NED-715 E3 on enclosed inquiry slip

450% INCREASE IN CYLINDER PRODUCTION

when prominent manufacturer switched to

SUNNEN HONING

PROBLEM: Step up production of high pressure (5000 psi) grease pump cylinder.

MATERIAL: Nitralloy • HOLE DIAMETER: .504" + .00005" − .00000"
HOLE LENGTH: 2" • HARDNESS: Rockwell 63 "C"
STOCK REMOVAL: .001" • FINISH: 3 micro-inches RMS

SOLUTION: MBB Precision Honing Machine with standard K16 honing unit, using 220 grit alundum abrasive stone and Sunnen MAN-844 Honing Oil. Semi-skilled labor is used.

RESULTS: 45 parts per hour, including gaging time—a 450% increase obtained by switching the job from lapping to honing. And, parts are straight and round, with a better seal between the cylinder and the piston. The production rate is highly satisfactory considering that the tolerance allowed is only 50 millionths.

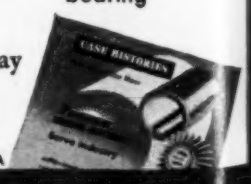
You'll find Sunnen Honing Machines economical for job lots or long production runs . . . for everything from de-burring to micro-fitting. They are frequently the solution to production problems that cannot be handled by drilling, reaming, boring, lapping or grinding.

These machines generate geometrically perfect holes with fast stock removal . . . produce a guaranteed accuracy of .0001" or better and surface finish to 2 micro-inches RMS . . . have a diameter range of ⅛" to 2⅝" . . . require no jigs or fixtures. Average installation costs less than $1,000.

TYPICAL HONED PARTS

Cast iron hydraulic cylinder — Steel worm gear — Bronze motor bearing

Sunnen Honing Machines may be *your* answer, too.



Send for FREE BOOKLET 723A

SUNNEN PRODUCTS COMPANY
7964 Manchester Avenue, St. Louis 17, Missouri
Canadian Factory: Chatham, Ontario

For more details circle NED-716 E3 on enclosed inquiry slip

Over Half of America's Top Companies Use "Speed Sweep"

THE BRUSH WITH THE STEEL BACK

BECAUSE it sweeps faster and cleaner, and outlasts ordinary brushes 3 to 1, Speed Sweep has become the No. 1 sweeping tool of American Industry — used by over 50,000 firms. Whether you use a few or a lot of brushes, you'll find it pays to switch to Speed Sweep.

Write for styles, sizes and prices.

MILWAUKEE DUSTLESS BRUSH CO.
MILWAUKEE 3, WISCONSIN

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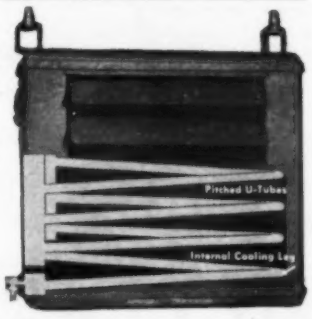
With **THERMOLIER** ... the Grinnell Unit Heater... YOU GET



CONTINUOUS RATED CAPACITY

Failure of unit heaters to give freedom from collected condensate in the heating element can interfere with heat output and adversely affect capacity.

A Thermolier Unit Heater successfully handles this drainage problem with its pitched U-tubes and internal cooling leg, through which all the condensate passes. In fact, condensate cooling is so efficient with Grinnell Thermoliers that a thermostatic trap — the simplest and least expensive of all traps — can be used with every model. Condensate temperature is lowered to the point where the trap is always draining — giving Thermolier Unit Heaters their *continuous rated capacity.*

For further details, call your local Grinnell distributor — or send for catalog.

GRINNELL
THERMOLIER UNIT HEATERS

GRINNELL COMPANY, INC.
Executive Offices: Providence, Rhode Island
Sales Offices and Warehouses in Principal Cities

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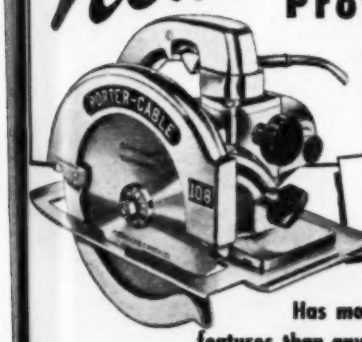
New! PORTER-CABLE'S Professional $8\frac{1}{4}''$ SAW

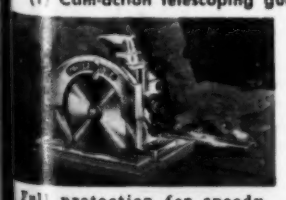


"CONTRACTORS' SPECIAL"... MODEL 108

Has more advanced features than any other saw! ONLY $95.

Big capacity, 10% more power, a full 2⅞" cut at 90°! Zips through rip cuts, cross cuts, compound miters — cuts off 1" x 10" pine in 1 second! Light (13½ lbs.); full-grip handle — easy to use anywhere. Safest saw on the market, for four exclusive reasons: (1) Cam-action telescoping guard, (2) Auxiliary front guard, (3) Extended wide-rest base, (4) Kickproof clutch!

See this Saw demonstrated at your dealers. Or write us for full details today.



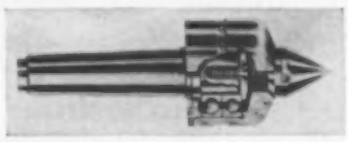
Full protection for speedy ALL-DAY Sawing—on any job!

Porter-Cable
Quality Electric Tools

PORTER-CABLE Machine Co., 1405 N. Salina St., Syracuse 8, N.Y.
In Canada write: Strongridge, Ltd., London, Ont.
Manufacturers of SPEEDMATIC and GUILD Electric Tools

▲ For more details circle NED-719 E3 on enclosed inquiry slip ▲

SHANK-TYPE CENTERS with antifriction bearings



Improved Red-E shank type center features antifriction single row angular contact bearings in duplex. The duplex mounting provides a definite degree of preload, maximum resistance to deflection under both thrust and radial loads. No wobble or chatter is permitted. Short overhang allows work to be close to tail stock for maximum rigidity. Cuttings, chips and dirt cannot enter the bearing assembly, nor can lubricant escape. Accuracy is held to 0.0001-in. with point zero. Shank type centers are available from stock in Morse tapers from No. 1 through 5, or with straight or tapered shanks, special head and points, or made to order. Made by **Ready Tool Co.,** 554-D Iranistan Ave., Bridgeport 5, Conn.

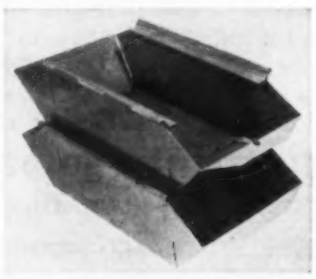
▲ For more details circle NED-720 E3 on enclosed inquiry slip ▲

HAND TRUCK rated capacity is 700 lb

Of tubular aluminum construction with an aluminum alloy blade of extra thickness, the model K hand truck for barrels and cases weighs only 20 lb, yet has a capacity of 700 lb. Blade tapers to a sharp entering edge for easy loading. Standard tires are solid rubber, but semi-pneumatic or cushion tires are optional. Grease fitted ball bearings provide ease of handling and increased service life. Made by **Honeyman Mfg. Co.,** Dept. N, 3925 S. W. Macadam Ave., Portland 1, Oreg.

▲ For more details circle NED-721 E3 on enclosed inquiry slip ▲

FUNCTIONAL TOTE BOX strong, stacks easily, won't jam



Many features that will speed materials handling in any plant are built into the RANtote 877 tote box. Hinged rail design prevents loose bails and prevents empty nested boxes from jamming regardless of the pressure applied to them. Loaded boxes will slide off each other without lifting or spilling the contents. Parts in any box are clearly visible and are accessible from both sides, and the hinged rail can be turned in so that the box will slide drawer-fashion in a suitable rack. Box weighs 10 lb, and is 6 in. high x 12 in. wide x 24 in. long. Made by **Randolph Metal Products Co.,** 3829-43 W. 43rd St., Chicago 32, Ill.

▲ For more details circle NED-722 E3 on enclosed inquiry slip ▲

if the load is light screen it right with a MIGHTY-MITE

SINGLE & DOUBLE DECK MODELS

Now, throw away time consuming hand screens. Mighty-Mite will efficiently, economically screen coarse or fine materials up to 15 tons per hour. Send for literature today.

Makers of Famous Seco Vibrating Screens

SCREEN EQUIPMENT CO., INC.
1750 WALDEN AVE., BUFFALO 25, NEW YORK
In Canada, United Steel Corp. Ltd., Toronto, Ont.

▲ For more details circle NED-723 E3 on enclosed inquiry slip ▲

FAMOUS ERA BEAM COMPASS

Used by Leading Draftsmen and Designers for INKING and PENCIL DRAFTING

A fine precision tool. Hair-line adjustment quickly made and maintained by spring-loaded knurled thumb rollers. No screws or clamps. Lead expeller for easy control of lead length. Slides instantly interchangeabue to any beam length. Made of anodized aluminum, stainless satin finish. Beam lengths from 7" to 100".

Combination Square TRAMMEL HEADS

Make Accurate Compass, Height Gage Outside and Inside Calipers

Heads chrome plated, screw parts protected by cadmium plating, scriber points made of hardened tool steel. Perfect for work on wood, plastic, sheet metal, linoleum, die or tool layout. Hundreds of uses. Comes complete with plated head, scriber points, pencil tips, special caliper points.

WRITE FOR LITERATURE

ENGINEERING RESEARCH ASSOCIATES, INC.
3475 East Nine Mile Road Hazel Park, Michigan

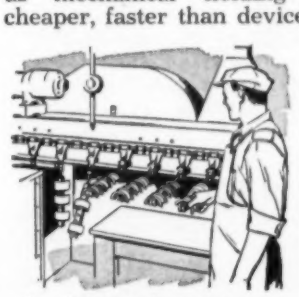
▲ For more details circle NED-724 E3 on enclosed inquiry slip ▲

See how Carboloy magnets save time, money in the shop

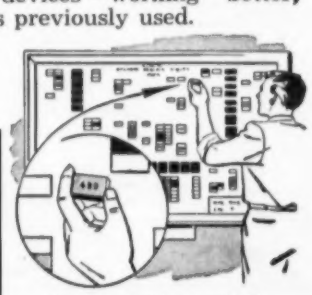
FREE PERMANENT MAGNET IDEA KIT

Send for free magnet kit containing suggestions that really pay off in the plant. See how Carboloy permanent magnets can eliminate costly clamps, jigs, vises . . . how they'll save you time and maintenance costs. Magnets need no electric power. Cost nothing to operate – last forever.

Shown below are a few of the ways magnets are used as mechanical holding devices – working better, cheaper, faster than devices previously used.

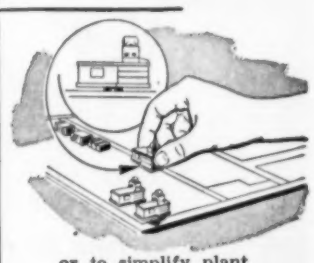


In plating-rack conveyors, for example . . .



to show traffic on vehicle dispatch board . . .

to attach ground from portable welders . . .



or to simplify plant layout planning.

Get a "You-Try-It" Magnet Assortment

Shop Package No. 1 – Contains 48 Carboloy Permanent magnets: 8 styles – 3 pairs each. Magnetic pull up to 2 lbs. per magnet. Price $10.00. Send coupon today.

Shop Package No. 2 – Contains 18 magnets: 4 styles – 2 pairs each; and 1 style – 1 pair. Magnetic pull from 3 lbs. to 12 lbs. per magnet. Price $15.00. Order today.

"Carboloy" is the trademark of the Carboloy Department of General Electric Company

MAIL THIS COUPON TODAY

CARBOLOY
DEPARTMENT OF GENERAL ELECTRIC COMPANY
11128 E. 8 Mile Blvd., Detroit 32, Michigan

☐ Send me free Magnet Idea Kit
☐ Send me.....Shop Package No. 1 at $10.00 each, postpaid.
☐ Send me.....Shop Package No. 2 at $15.00 each, postpaid.
☐ Enclosed is check or money order for $..... ☐ Send C.O.D.

Name_____
Address_____
City_____ Zone_____ State_____

▲ For more details circle NED-725 E3 on enclosed inquiry slip ▲

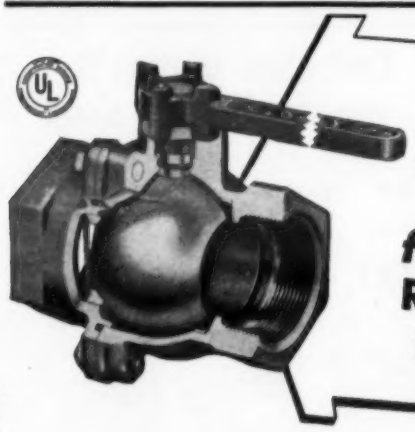
Don't
HALF-BURN
"Those Papers"
SHRED THEM!

Be safe!
In one simple, clean operation, SHREDMASTER paper shredders cut obsolete confidential documents, etc., into long, thin shreds, worthless except as good packing material.

And SHREDMASTERS pay for themselves quickly! For complete details, request Circular #5.

THE SHREDMASTER CORPORATION
197 Willoughby Ave., Brooklyn 5, New York

▲ For more details circle NED-727 E3 on enclosed inquiry slip ▲



Just a quarter turn for FULL ROUND FLOW

Dependability and efficiency are the reasons why Rockwood Ball Valves are in a class by themselves.

A quarter turn opens the ball valve for full, *round* flow — liquids follow the natural course of flow without halt or turbulence. Another quarter turn and the floating bronze ball, combined with the synthetic rubber seat, forms a leakproof seal. Chrome-plating of bronze ball prevents scratching, pitting and abrasion.

For use in oil refineries, food, textile, chemical and rubber plants, etc. Tested by Underwriters' Laboratories, Inc. For further details, send for free Bulletin V-4. Rockwood Sprinkler Company, 44 Harlow Street, Worcester 5, Mass. Distributors in all principal cities.

ROCKWOOD BALL VALVES
THE FLOW IS AS ROUND AS THE PIPE ITSELF

▲ For more details circle NED-728 E3 on enclosed inquiry slip ▲

A New 2-in-1 TAPE
• INSULATES
• PROTECTS
All in One Neat Operation

IDEAL
PLASTIC Electrical Tape

• 2-way Stretch
• High dielectric
• Fits snugly
• Insulates perfectly
• Saves space
• Sticks tight
• Long life

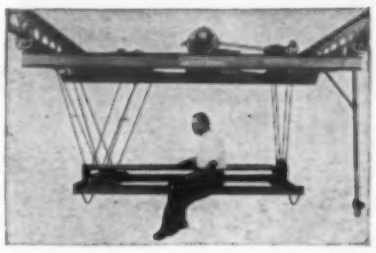
Saves work on many jobs—does the work of both friction and rubber tape. Resists abrasion. Resistant to weather, oils, greases and many corrosive chemicals. Two sizes ¾" x 20' and ¾" x 60'.

TRY IT FREE!

IDEAL INDUSTRIES, Inc.
1032 Park Avenue, Sycamore, Illinois
Please send me FREE sample of IDEAL Electrical Tape.
Name_____
Company_____
Address_____
City_____ Zone____ State____

▲ For more details circle NED-729 E3 on enclosed inquiry slip ▲

STABILIZED CRANE
loads will not swing



Simple arrangement of hoisting ropes on this crane forms a triangular suspension so that load is held rigidly in place. This eliminates longitudinal, lateral and rotational sway. Load can be raised or lowered through a considerable distance and yet, with nothing more than the hoisting ropes supporting it, will remain perfectly stable. This feature is particularly useful in such operations as tank dipping, assembly when it is desirable that parts be held rigidly in position, or for traveling X-ray equipment. It also makes possible the safe delivery of molten metal in a foundry by an automatic dispatch method direct from cupola to molding area. Made by the **Cleveland Crane & Engineering Co.,** Cleveland Tramrail Div., 1143 E. 283rd St., Wickliffe, O.

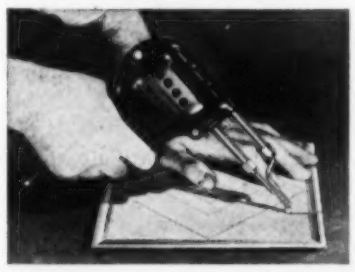
▲ For more details circle NED-730 E3 on enclosed inquiry slip ▲

FLASHLIGHT BULB
has spot and flood filaments

Like automobile headlamps, this flashlight bulb has two filaments, each of which can be turned on independently at the flip of a switch to throw either a flood or spot beam. Flashlight manufacturers are now designing special two-cell flashlights to accommodate this bulb. Designated as PR-14, it is 7/16-in. diameter and has a maximum overall length of 1 3/16-in. Bulb is rated at 2.4 v and ½-amp. Made by **General Electric Co.,** Lamp Div., Dept. 166-NED, Nela Park, Cleveland 12, O.

▲ For more details circle NED-731 E3 on enclosed inquiry slip ▲

ELECTRONIC SOLDERING GUN
has special tips for varied uses



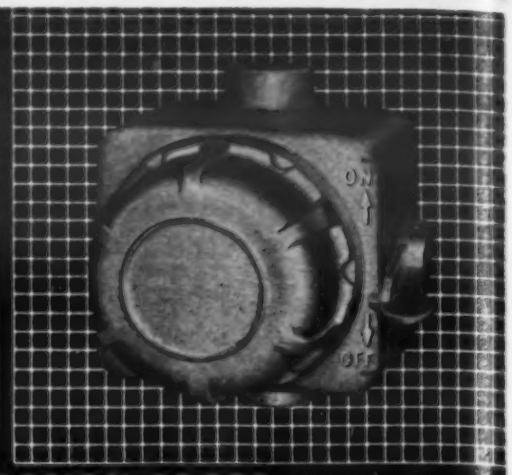
Two special tips have been developed for use with the Wen Quick-Hot electronic soldering gun (*NED*-4369, *May* 1952). Feraloy long-life tip is ferrous coated to protect base copper against corrosion and silver plated to insure continuous good electrical contact and heat transfer. These tips are said never to require dressing, stay tinned indefinitely and retain full tip contact area. Other new tip is for cutting plastic tile. It enables cutting of straight lines, curves, holes, angles and special contours easily. Price of special tips is 50 cents each. Made by **Wen Products, Inc.,** 5808 Northwest Highway, Chicago 31, Ill.

▲ For more details circle NED-732 E3 on enclosed inquiry slip ▲

SWING FORKS
for fork lift trucks

Hi Duty swing fork attachment for Hi Duty 300 fork lift truck is designed for both palletized and unpalletized handling of tires, barrels and similar products. Forks are hydraulically actuated and swing from the normal pallet handling position to a spread of 64 in., making it possible to handle tire sizes from 9:00 x 20 and up, ordinarily not economically palletized. Accessory is mounted close to the elevating mechanism so that carrying capacity is maintained with a minimum turning radius. Made by **Transitier Truck Co.,** 2475 N. W. 23rd Ave., Portland 10, Oreg.

▲ For more details circle NED-733 E3 on enclosed inquiry slip ▲



EXPLOSION-PROOF
CIRCUIT BREAKER
. . . unaffected by temperature

ESPECIALLY SUITED for the protection of individual circuits or fractional HP motors, either one or two HEINEMANN Circuit Breakers can be furnished in this small Class 1, Group D housing.

Operating on the HEINEMANN hydraulic-magnetic principle, the circuit breakers are unaffected by temperature . . . no de-rating is required. They can be turned ON immediately after a fault has been cleared . . . there is no waiting to reset. Time delay prevents nuisance tripping on starting inrush or momentary overloads.

Available in ratings up to 50 amps. WRITE FOR BULLETIN 1010.

HEINEMANN ELECTRIC CO., 106 Plum St., Trenton 2, N.J.

▲ For more details circle NED-734 E3 on enclosed inquiry slip ▲

Won't Pull Apart!

OPW HOSE SWIVELS
THE STRONGEST LINK IN YOUR HOSE LINE

WRITE FOR BULLETIN NP-3

• NO PRODUCT LOSS
• NO DESTRUCTION OF PROPERTY
• NO HAZARD

Add life to your hose . . . make it easier to handle . . . eliminate twisting, kinking and tension resulting from rotary motion. Use OPW's leakproof Swivels with fueling nozzles, liquid dispensing nozzles, on all hose lines.

No. 2 Swivel for heavy duty pressure or vacuum service.

No. 17-ST Swivel for stationary installations such as service station delivery hose or similar applications.

OPW CORPORATION
2735 COLERAIN AVENUE • CINCINNATI 25, OHIO

▲ For more details circle NED-735 E3 on enclosed inquiry slip ▲

WASHERS and STAMPINGS
Geared to Industry's Production Demands Since 1887

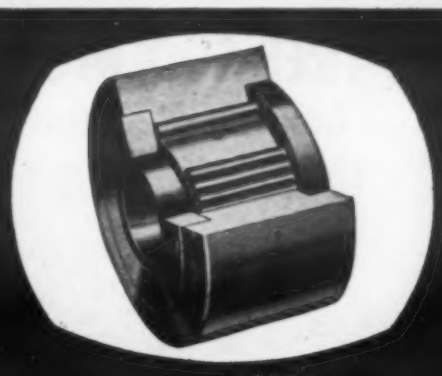
MILWAUKEE WROT WASHERS

Over a period of 65 years, producing standard and special washers of all types for all industries, we have made up more than 25,000 sets of dies . . . used in the production of washers which are stocked in thousands of different sizes. On special orders we will make up dies to your specifications.

Let us quote on your requirements for washers and stampings . . . covering fabrication in any material and any finish . . . machined, heat-treated or surface ground, as may be specified.

WROUGHT WASHER MANUFACTURING CO.
The World's Largest Producer of Washers
2256 S. BAY ST., MILWAUKEE 7, WIS.

▲ For more details circle NED-736 E3 on enclosed inquiry slip ▲



versatility
for cam follower mounting provided with
MULTIROL® **CYR** bearings

With this series it is possible to utilize the full advantages of Multirol Cam Follower bearings in a yoke mounting. In the CYR bearing, an inner race replaces the stud to further increase the adaptability of precision cam followers in automatic machinery requiring cam action or guide and support rollers.

Send for McGill Catalog No. 52

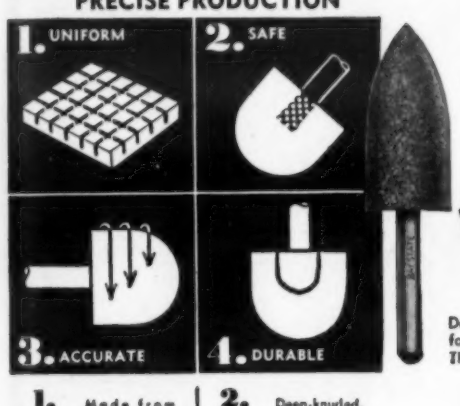
McGILL® precision bearings

McGILL MANUFACTURING CO., INC. 101 N. Lafayette St. Valparaiso, Indiana

For more details circle NED-737 E3 on enclosed inquiry slip

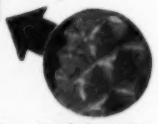
BAY STATE MOUNTED POINTS & WHEELS

Best because: You get . . .
UNIFORM, SAFE, PRECISE PRODUCTION



INDICATOR ACCURACY

Precision Shaped on spindles, for perfect concentricity.



Deep Knurled spindles for EXTRA SAFETY. THE HEADS STAY ON!

1. Made from solid blocks of perfectly mixed materials. Result: Complete elimination of "hard and soft" spots.

2. Deep-knurled, high strength alloy steel spindles, and special adhesive. Result: Abrasive heads stay on spindles.

3. Each wheel trued and shaped after mounting on its spindle. Result: Perfectly concentric; ready to use when you get it.

4. Completely uniform structure; pretested, positive bonding. Result: Longer useful life; use them right down to the spindle.

Specially Cemented. Wrench-and-vise test proves its strength.

WIDE RANGE OF SHAPES & SPECIFICATIONS AVAILABLE FOR IMMEDIATE SHIPMENT

BAY STATE

SEND FOR CATALOG
BAY STATE ABRASIVE PRODUCTS CO.
Westboro, Massachusetts, U. S. A.
Branch Offices and Warehouses: Chicago, Cleveland, Detroit, Pittsburgh
Distributors — All Principal Cities
In Canada: Bay State Abrasive Products Co. (Canada) Ltd., Brantford, Ont.

For more details circle NED-738 E3 on enclosed inquiry slip

ALLIS-CHALMERS *Dry-Type* TRANSFORMERS

Boost Low Voltages

Install an Allis-Chalmers dry-type transformer right next to the load it serves — on overhead trusses, walls, platforms, or directly on the machine. You'll get higher motor, lighting, and thermal efficiency, resulting in economical utilization of power.

Installation is easy because knockouts are provided for connecting conduits directly to transformer case. System cables are connected to transformer terminals in roomy compartments. No vaults or expensive enclosures are needed. Install A-C dry-type transformers and forget them except for periodic inspections. No insulating liquids to mess with; no gauges or gaskets to fuss with.

Call your nearest A-C district office for full information or write Allis-Chalmers, Milwaukee 1, Wisconsin.

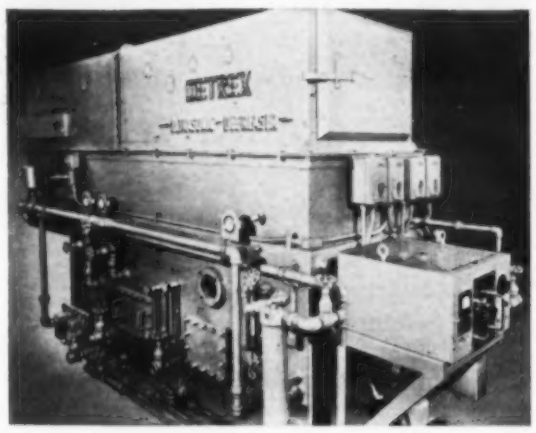
A-3958

ALLIS-CHALMERS

For more details circle NED-739 E3 on enclosed inquiry slip

ULTRASONIC METAL CLEANING
ceramic transducer element results in practical process

Reported more flexible than natural quartz, the ceramic transducer used in this ultrasonic metal parts cleaner projects energy through a solvent at a frequency of 430,000 cycles per second. The transducer can be safely immersed in the solvent, as it requires a potential of only 40 v. The transducer is 6 in. long, and units may be built up in series to focus energy over a wide area in which extreme turbulence is created. Deep, penetrating cleaning action quickly removes even microscopic particles of dirt, grease, and chips from the most intricately designed parts.

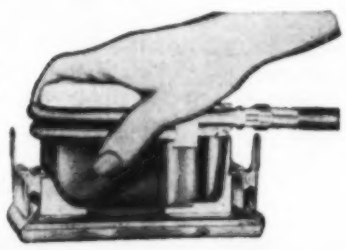


The 12 x 6-ft unit illustrated has been developed for the Electric Shaver Div. of Remington Rand Inc. Final cleansing of parts by the use of ultrasonic waves is incorporated in the regular degreasing cycle. Made by **Detrex Corp.**, P. O. Box 501-N, Detroit 32, Mich.

For more details circle NED-740 E3 on enclosed inquiry slip

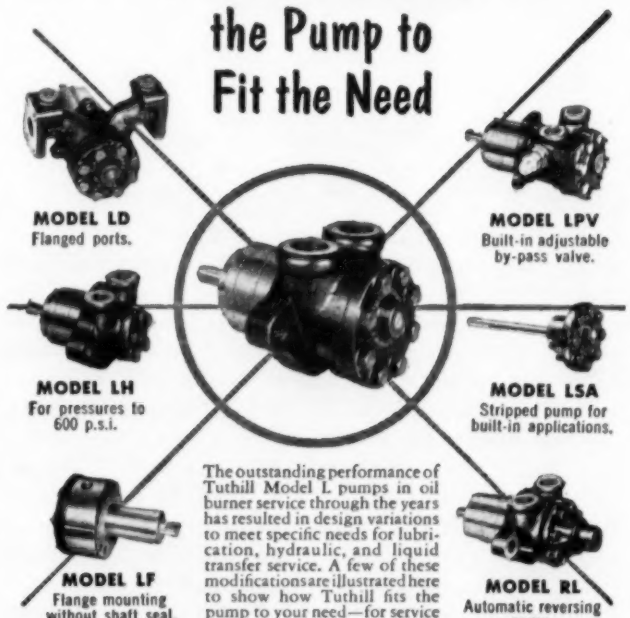
AIR SANDER
4-lb hand type operates on 50-60 psi

Featuring palm-size grip for maximum operator comfort, 4-lb model J-R reciprocating air-powered Easy sander operates at 4500 strokes per minute on air pressure of only 50 to 60 psi. Air switch type control, No-Surge automatic mist-type water spray for wet sanding and easy-to-use abrasive holder for attaching several sheets of sand paper at one loading are other features. Slide action for attaching sanding pads allows for up to 2 in. off-center adjustment of pad. This position allows sanding in grooves, up to protruding trim and other hard-to-get-at areas. Sander is powered by vane type motor. Made by **Detroit Surfacing Machine Co.**, Dept. N, 1333 E. Eight Mile Rd., Detroit 20, Mich.



For more details circle NED-741 E3 on enclosed inquiry slip

Here's How **TUTHILL** Builds the Pump to Fit the Need



The outstanding performance of Tuthill Model L pumps in oil burner service through the years has resulted in design variations to meet specific needs for lubrication, hydraulic, and liquid transfer service. A few of these modifications are illustrated here to show how Tuthill fits the pump to your need—for service from ⅓ to 6 g.p.m. and pressures to 600 p.s.i.

Write for Catalog No. 101 for complete details

TUTHILL PUMPS FOR THE PURPOSE

TUTHILL PUMP COMPANY
939 East 95th Street, Chicago 19, Illinois
Canadian Affiliate: Ingersoll Machine & Tool Company, Ltd. Ingersoll, Ontario, Canada

For more details circle NED-742 E3 on enclosed inquiry slip

one man does the work of 3

The lowest costing lift truck you can buy, the Red Arrow features unusual ease of operation, speed and economy. Maintenance cost practically nil. Machined standardized parts and machined bolted frame . . . eliminate downtime. Pays for itself many times a year in time and manpower saved.
Send for Bulletin 252 Today.

Red Arrow LIFT TRUCK
STUEBING ENGINEERED

LIFT TRUCKS INC., CINCINNATI 14, OHIO

For more details circle NED-743 E3 on enclosed inquiry slip

Here's a new gearmotor design with added compactness ...efficiency

This new Single Reduction Life-Line Type B Gearmotor features an overhung gearhead design which makes it especially adaptable to many coupled applications such as side-entry agitators.

Taper hardened gears, sturdy housing and anti-friction bearings are a few of the many other unit features . . . features assuring long, trouble-free performance.

These Life-Line Gearmotors are available in ratings from 1 to 30 hp, 780 to 420 rpm, AGMA classes I and II.

Here's a bulletin giving full information on the compactness and efficiency of these new Westinghouse Gearmotors. Sixteen methods of unit mounting are diagramed and explained. They show how Type B Gearmotors can be supplied to suit unusual conditions of space or location of driven equipment.

A copy of this valuable bulletin is yours for the asking. Just drop a line to Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania, and ask for DB 3600-H-1.

J-07336

YOU CAN BE SURE...IF IT'S Westinghouse

For more details circle NED-744 E3 on enclosed inquiry slip

KEEP AIR ACCURATE AND CLEAN

with MASONEILAN AIR REDUCING VALVE AND FILTER

This Masoneilan pair provides all that's needed to keep operating air accurate and clean. Built for large capacity, minimum pressure loss and negligible maintenance, their extra-sturdy construction assures extra-years of dependable service.

For initial pressures up to 250 lbs. Reduced pressure 5 – 60 lb. – 60 – 100 lbs. Sizes ¼" to ½". Pressure gauge included. Sold separately or in combination.

Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

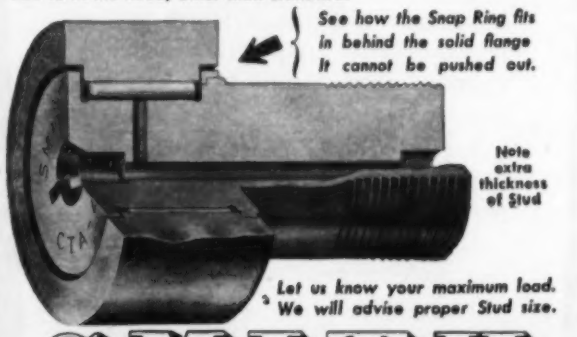
MASON-NEILAN REGULATOR CO.
1189 ADAMS ST., BOSTON 24, MASS., U. S. A.

For more details circle NED-745 E3 on enclosed inquiry slip

Something New!

SMITH CAM FOLLOWER WITH HEAVY DUTY STUD

Has outstanding advantage of Stud up to 100% greater in diameter (in relation to size of roller) than stud found in any other cam follower. This is possible because of snap ring construction and integral flange on Stud. Diameter of Stud can be made any size to fit the need, other than standard.



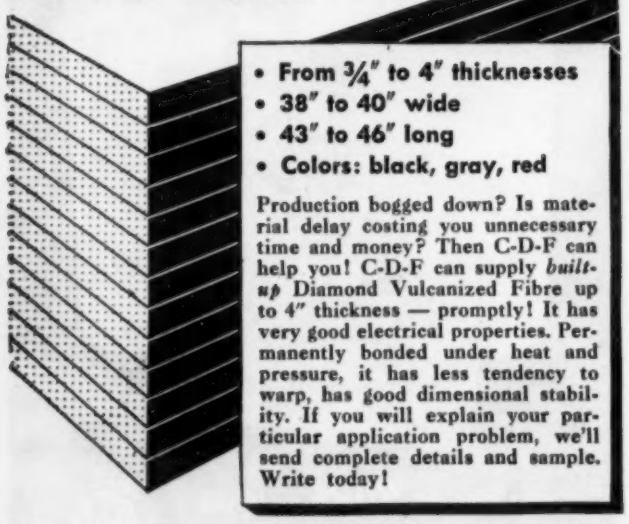
SMITH BEARING CO.

STATION D, P.O. BOX 1119, TRENTON, N. J.

For more details circle NED-746 E3 on enclosed inquiry slip

NOW...FAST... CDF

DIAMOND VULCANIZED BUILT-UP FIBRE



- From ¾" to 4" thicknesses
- 38" to 40" wide
- 43" to 46" long
- Colors: black, gray, red

Production bogged down? Is material delay costing you unnecessary time and money? Then C-D-F can help you! C-D-F can supply *built-up* Diamond Vulcanized Fibre up to 4" thickness — promptly! It has very good electrical properties. Permanently bonded under heat and pressure, it has less tendency to warp, has good dimensional stability. If you will explain your particular application problem, we'll send complete details and sample. Write today!

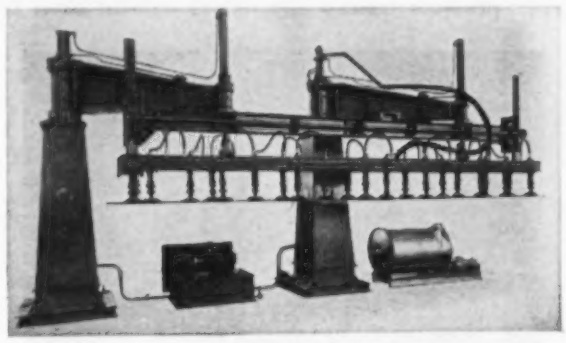
THE NAME TO REMEMBER . . . DIAMOND VULCANIZED FIBRE

Continental-Diamond Fibre Company
NEWARK 30, DELAWARE

For more details circle NED-747 E3 on enclosed inquiry slip

UNPILING & STACKING MACHINE
vacuum operated, lifts 880 lb

Slab, plates or sheets up to 42 in. wide and weighing up to 880 lb each can readily be handled by this unpiling and stacking machine. It will lift, move



over a distance of 4 ft 6 in., and deposit on the receiving table three such slabs every minute. The pick-up beam is 22 ft long, and has a series of staggered suction cups to give good grip on any size sheet within the machines' capacity. All movements are by means of hydraulic cylinders. Made by **W. S. Rockwell Co.,** 216 Eliot St., Fairfield, Conn.

For more details circle NED-748 E3 on enclosed inquiry slip

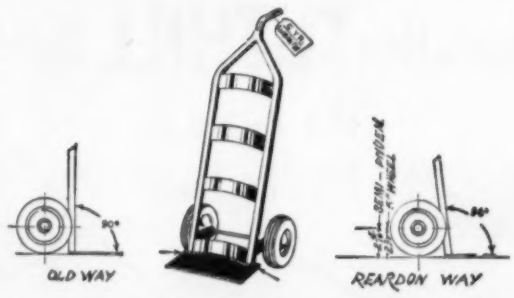
OVERHEAD CONVEYOR SYSTEM
can make narrow radius turns

Working equally well in a vertical or horizontal position, the Landahl Chainless conveyor system does not require wide-radius turns and therefore can be installed with a minimum loss of floor space and ceiling area. It is a series of trolley units connected by solid steel rods and spaced at 24-in. centers on a double angle track. Radius of the turn is limited only by the rod length. Rods are stocked in 18, 24 and 30-in. lengths for turns of the same radii, but are available in any length. Conveyor functions equally well at any angle, even in vertical spirals. Each trolley unit is self-lubricating. Made by **Landahl Conveyor Co.,** 1382 Essex Ave., Columbus 16, O.

For more details circle NED-749 E3 on enclosed inquiry slip

HAND TRUCKS
nose plate carries 900 lb

Now built with 96-degree angle between nose plate and frame instead of 90 degrees, single and double handle Handy hand trucks feature easier loading



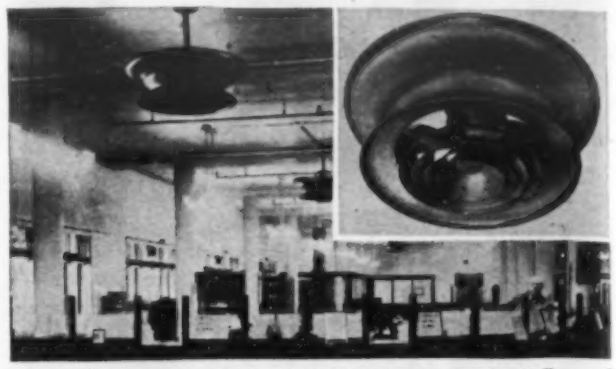
and increased lifting leverage. The 3/16-in. steel nose plate carries up to 16 in. of electric weld and is tested at 900 lb. Load is carried directly on balanced wheels and not on back of operator. Welded unit features ⅛ x 1¼-in. channel iron frame, four ⅛ x 2 in. cross bands and either molded rubber or semipneumatic wheels. Made by **Reardon Products,** 2105 S. Adams St., Peoria 2, Ill.

For more details circle NED-750 E3 on enclosed inquiry slip

DO YOU KNOW? Static electricity is generated and harnessed for ignition purposes on automobiles by new French system which has recently been licensed for manufacture and distribution in this country. This ignition system is applicable to automobile, stationary and marine engines. Its low amperage causes virtually no deterioration of spark plugs, and its efficiency is unaffected by accumulated carbon or improper spacing of the spark plug electrodes. Offered by Heckethorn Mfg. & Supply Co., Littleton, Colo.

For more details circle NED-751 E3 on enclosed inquiry slip

DRAFT-FREE COOLING . . . Low-Cost Comfort



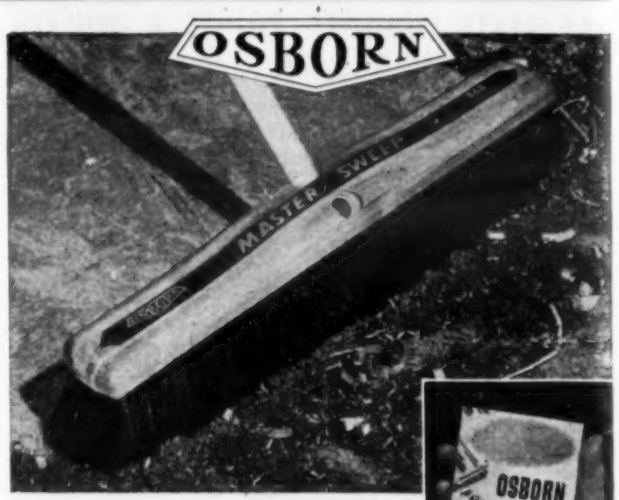
The Wilster room air circulator creates a constant flow of natural draft-free air—for cooling in summer, and for even heat distribution in winter. The louver design insures even circulation to all parts of the room. A single unit circulates air completely every three minutes in 5000 cubic feet of space.

Automatic circulation thermostatically controls air flow without harmful drafts. Easily installed: simply hang it, and plug in.

Installations in offices, drafting roofs, factories, cafeterias, etc., are providing more comfortable year around working conditions. An inexpensive way of solving your air conditioning problems. WRITE NOW FOR A FOLDER.

WILSTER, INC.
1325 East 152nd St. East Cleveland 12, Ohio

For more details circle NED-752 E3 on enclosed inquiry slip



Want top quality in brushes? . . . just specify "Osborn"

LOWEST end-of-service cost is the thing that counts in brushes. You get this when you specify OSBORN. Built with only the finest materials and workmanship, each brush will do its job longer. Osborn brushes are backed by more than 60 years of service to Industry. Carried in stock by leading Industrial Distributors. *The Osborn Manufacturing Company, Dept. Z-5, 5401 Hamilton Avenue, Cleveland 14, Ohio.*

HANDY CATALOG. Simplifies specifying of Osborn maintenance brushes. Write for your free copy.

Osborn Brushes

OSBORN POWER, MAINTENANCE AND PAINT BRUSHES AND FOUNDRY MOLDING MACHINES

For more details circle NED-753 E3 on enclosed inquiry slip

SOUTH BEND 7" SHAPER

Cuts Costs OF MACHINING SMALL PARTS

It's fast—accurate—easy to operate. The South Bend 7" Precision Shaper can consistently give you low machining costs on small parts. Designed to handle a wide variety of work in this class, it will enable you to release larger shapers for heavier work, save on machine investment and economize on both power and upkeep. Find out how this versatile shaper can give you better service on production, toolroom or maintenance machining.

Also write for catalogs on South Bend Lathes (9" to 16-24" swings) 14" Drill Presses and Lathe Attachments.

SOUTH BEND LATHE
SOUTH BEND 22, INDIANA
Building Better Tools Since 1906

For more details circle NED-754 E3 on enclosed inquiry slip

AIR POWERED DRILL UNIT FEATURES ELECTRICAL CONTROL, HYDRAULIC CHECKING

The Bellows HYDRAIR POWER FEED DRILL is a precision air powered drilling device providing rapid advance, controlled feed, and rapid return. It will handle drills up to ¼" and will drill to a depth of 4".

Standard rated free spindle speed 2800*. Rated ¼ h.p. Air driven spindle; air-powered, hydraulically checked feed; electrically controlled cycle. Mounts at any angle.

Get This FREE BOOKLET

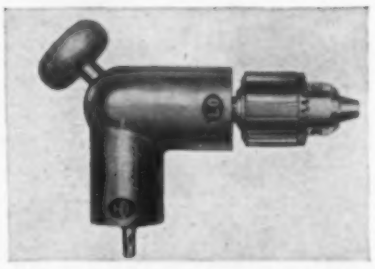
Specifications, technical data, diagrams of The Bellows HYDRAIR. Address: The Bellows Co., Dept. NED-553, Akron 9, Ohio.

*Other Speeds Available on Special Order.

The Bellows Co.
AKRON 9, OHIO

For more details circle NED-755 E3 on enclosed inquiry slip

RIGHT ANGLE DRILL attachment uses high speed bits



It is possible to drill a 2 9/16-in. hole through hardwood with a ¼-in. capacity heavy duty portable drill when the Korner King right angle drill attachment is used. It is offered in a kit with ten Super Speed bits, all for use with a ¼-in. electric drill. Right angle drive increases range of drills by adding two speeds to their operation. Drills of 2000 rpm are converted to 1000 rpm with a considerable increase in power. This gear ratio is reversed by turning the attachment end for end. New bits feature curved cutting blades which require minimum thrust and develop less torque. Sizes range from ⅝ to 2 9/16-in. Made by **R.C.S. Tool Sales Corp.**, Dept. P73, Joliet, Ill.

For more details circle NED-758 E3 on enclosed inquiry slip

TROUBLE LIGHT REEL locks at any length within extension

Among features of this Cordomatic trouble light reel with full 20-ft extension are stubby, heavy duty handle for easy manipulation in cramped position and gravity locking mechanism which operates same as window shade. Easy-open reflector guard allows bulb changing without removal. Reel is equipped with No. 18/2 neoprene jacketed kinkproof 20-ft cord which is oil and water resistant and operates in and out with finger tip control. Also available are extensions 25 and 40 ft long. Reel operates easily and locks at any length within full extension. Either 360-degree rotating ceiling mounting or 180-degree wall mounting can be furnished. Made by **Vacuum Cleaner Corp. of America**, Cordomatic Div., 1724 Indiana Ave., Philadelphia 44, Pa.

For more details circle NED-759 E3 on enclosed inquiry slip

DO YOU KNOW? There's a 52-page illustrated guide for safety services that is available to industrial safety directors and others concerned with plant accident prevention. It lists periodicals, newsletters and a complete library of technical and administration publications covering all phases of occupational accident prevention. To assist foremen, this guide offers a monthly magazine and 24 training films that show supervisors how to use basic human traits to build a better safety program. Copies of Service Guide 2.1 are available free from National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

For more details circle NED-760 E3 on enclosed inquiry slip

Tough Babies!

THEY DEFY ROUGH HANDLING!

LOWER COST Material Handling favors these rugged items! Mill-box above features steel compound Top rail (see inset) and Bulge corners, both extraordinary wear-resisting. Note slat reinforcing and non-jamming "nesting limits"

BOTH BUILT BY "BAL" BUILT WITH A CONSCIENCE FOR MATERIAL HANDLING

Nesting tote boxes at right, also built with handles and strongly reinforced all-fibre; hard, vulcanized for severe usage.

ALSO HARD VULCANIZED FIBRE TRUCKS, DRUMS, SPECIAL CASES.

• *Write for Catalog!*

WILLIAM BAL CORPORATION
11 Johnson St, Newark 5, N. J.

For more details circle NED-762 E3 on enclosed inquiry slip

OTC *REPLACE 29 SIZES WITH THESE TWO*

NEW GIANT ALLOY adjustable wrenches

THINNER-LIGHTER-STRONGER

Until now 29 wrenches have been needed to handle the jobs done by these two new alloy adjustable wrenches. They are THIN—to get at the work easily. Strong—designed for added strength at leverage points. Light—to make job servicing easy. Economical—saves time, tools and materials. Large jobs become simple ones.

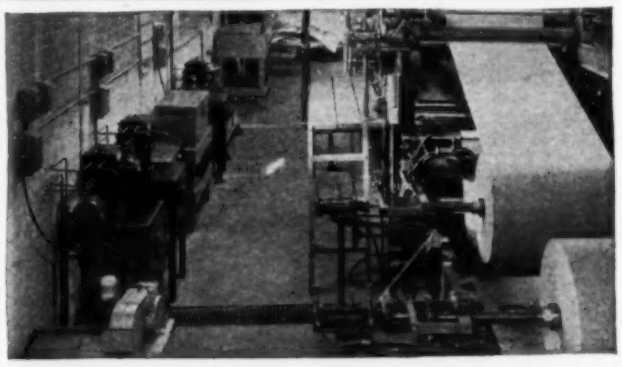
Giant alloy wrench No. OA-24 is 24" long, ⅞" thick, weighs only 10 lbs. and adjusts to 13 standard sizes from 1⅜" to 2⅞". OA-36 is 35" long, 1⅛" thick, weighs only 22 lbs. and adjusts to 16 standard sizes from 2 15/16" to 4¼".

REPLACE 29 SIZES PATENT APPLIED FOR

ANOTHER EXAMPLE OF ENGINEERING THAT MAKES OTC TOOLS OUTSTANDING

OWATONNA TOOL CO.
436 CEDAR ST., OWATONNA, MINNESOTA

For more details circle NED-756 E3 on enclosed inquiry slip



How to cut costs with accurate web guiding

Morris Paper Mills, of Morris, Ill. saves money every day with Askania Edge Position Control.

Morris used to trim ½" from each side of boxboard run through this laminator. It took two men.

Now, with Askania Edge Position Control, they automatically merge boxboard layers within 1/32". No more trimming—no more useless scrap—and one operator is released for other duties.

Askania Edge Position Control is versatile—controls any material handled in webs: paper, plastic, foils, textiles, metals, rubber, or anything else.

What's your application? Ask for Bulletin No. 141, "Askania Edge Position Control."

ASKANIA REGULATOR COMPANY
258 E. Ontario Street Chicago 10, Illinois
Subsidiary of General Precision Equipment Corp.

For more details circle NED-757 E3 on enclosed inquiry slip

DAVIS No. 300-S MOTOR OPERATED VALVE

Many industrial plants have found that the Davis No. 300-S Motor Operated Valve solves many flow control problems on process lines, zone heating, and FIRE EMERGENCY SHUT OFF. This valve features: Direct connection between valve stem and 2-position motor . . . 30 second timing . . . 25 watt power consumption; no stand-by consumption . . . Renewable disc . . . No internal packing . . . Visible position indicator . . . and Davis' famous tight-closing, non-sticking, single seat, pilot stem design.

No. 300-S is available in sizes from ½" to 6" for various service requirements. Other designs for higher pressures and larger sizes. *Bulletin on request.*

Davis
DAVIS REGULATOR COMPANY
2531 South Washtenaw • Chicago 8, Illinois

For more details circle NED-761 E3 on enclosed inquiry slip

A.C. or D.C. . . . single phase or polyphase . . . induction or synchronous . . . in all ratings and frame types —whatever the need, you can find the one motor best suited to the job in the complete line of Fairbanks-Morse Motors. Call your nearby Fairbanks-Morse electric motor branch for details, or write: Fairbanks, Morse & Co., 600 So. Michigan Ave., Chicago 5, Ill.

FAIRBANKS-MORSE,
a name worth remembering

ELECTRIC MOTORS AND GENERATORS • MAGNETOS • PUMPS
DIESEL LOCOMOTIVES AND DIESEL ENGINES • FARM MACHINERY
SCALES • RAIL CARS • HOME WATER SERVICE EQUIPMENT

For more details circle NED-763 E3 on enclosed inquiry slip

EASIEST OF ALL SHEARS TO OPERATE!

"Easiest of all shears to operate"— so many operators say of Steelweld Pivoted-Blade Shears. These machines are radically different from all other shears. They have many new features heretofore unavailable that ease the work, speed production, increase accuracy, reduce maintenance.

Get the facts on Steelweld Shears. Built in all sizes for plate up to 18 feet long or 1-1/4" thick.

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

Send for free copy Catalog No. 2011

THE CLEVELAND CRANE & ENGINEERING CO.
6625 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

▲ For more details circle NED-764 E3 on enclosed inquiry slip ▲

MAKE GAGES LAST LONGER

Offered as a service to our thousands of satisfied customers and friends.*

✗ DON'T

- ✗ Don't force gage into or over part being checked.
- ✗ Don't lay gages on metal benches or dirty surfaces.
- ✗ Don't clean gages in water, kerosene or carbon tetrachloride—all cause rusting.
- ✗ Don't spin parts on or off gages. This accelerates wear.
- ✗ Don't lay gages in sunshine — expansion causes errors.
- ✗ Don't use gages that fit loosely. Know the "feel" of proper gaging.
- ✗ Don't use gages that show visible burrs, nicks or irregularities.

DO

- ✔ Learn how to hold and use gages properly. Fit must be snug and smooth. Make wooden gage racks covered with oiled felt for clean gages.
- ✔ Roll or twist gages into work slowly to get proper feel.
- ✔ Check gage against master gage before use, at least once each shift and before returning to tool crib.
- ✔ *Include gaging expense as part of manufacturing budget. Quality product companies now do this.*

*8¼ x 11" reprints of this ad in three colors on heavy stock are available at no charge for posting in your factory.

. . . AND insist on all of these quality features when you buy new gages:

Reversible Plugs . . . enable you to cut off worn tips at each end—use new section exposed for six to eight times more wear life.

Entire Plug Surface Usable—straight untapered pieces provide uniform gaging surface over entire length—finish to 1.5 microinches RMS or less for maximum amount of wear life.

Pin-Vise Aluminum Handle—positive locking; plugs can't slip. Easily loosened for replacing or reversing plug. Plug length adjustable for different hole depths.

Easy Recognition—GO in green finish; NO GO red.

Special Hardening—plugs hardened throughout . . . enables you to grind plugs down to next lowest size . . . gives greater economy.

We'd like to discuss your gage needs and have your gage orders. Our engineering representatives are located in all principal cities. Write or telephone us today.

SIZE CONTROL COMPANY
2500 W. Washington Blvd., Chicago 12, Ill. MOnroe 6-6710
Division of American Gage & Machine Company

SIMPSON ELECTRIC COMPANY
5200 W. Kinzie St., Chicago 44, Ill. COlumbus 1-1221

WALSH PRESS & DIE CO.
4709 W. Kinzie St., Chicago 44, Ill. EStebrook 8-6700

▲ For more details circle NED-765 E3 on enclosed inquiry slip ▲

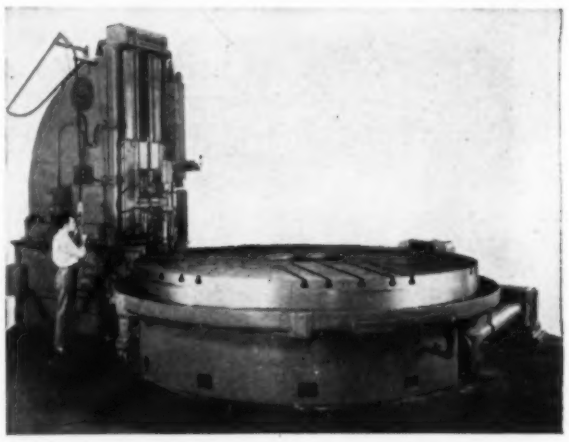
FLOORMARKING MACHINE
features forward guide wheel

Latest improvement made on Florline marking machine for painting floor lines at walking speed is a third retractable wheel which acts as line guide 18 in. forward of carriage. Guide wheel keeps machine "on track" long before line marking begins. Arm of wheel folds back upon striking curb or wall, permitting machine to continue right up to barrier without interference. Handle of machine can be raised to lift brush, allowing machine to be rolled on three wheels to various areas. All wheels are of Oilite bearing construction. Floor marker will operate around and close to machinery and stock. Price is approximately $98. Made by **H. C. Sweet Co.**, 24396 W. Seven Mile Road, Detroit 19, Mich.

▲ For more details circle NED-766 E3 on enclosed inquiry slip ▲

LARGE-GEAR SHAVERS
four machines in line work accurately, fast, and economically

Large gears up to 15 ft in diameter and with up to 48-in. face width can be finished accurately, fast and economically with this line of standard large-gear

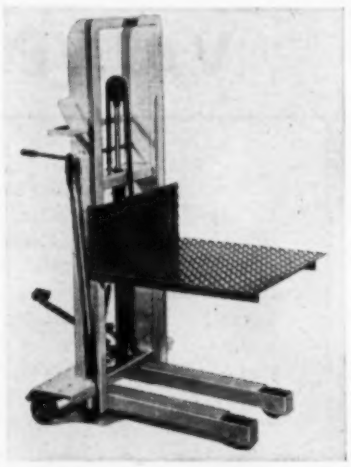


shaving machines. They can be used for spur, helical or herringbone gears, internal or external, with or without integral shafts, as used in marine, railroad, power plant, ordnance and other large-gear applications.

Advantages reported include reduction or elimination of need for lapping, reduction in finishing time, accuracy to a few tenths on 15 ft gears, ability to minimize hobbing time by using multiple thread hobs and ability to produce gears that will mate automatically. These V-series standard machines are available in four models with 48-in., 72-in., 120-in., and 180-in. gear diameter capacities. Facilities for mounting integral checking accessories are provided so that gears may be checked before removal from the machine. An infinite choice of table drive speeds is available. Made by **Michigan Tool Co.**, 7204 E. McNichols Rd., Detroit 12, Mich.

▲ For more details circle NED-767 E3 on enclosed inquiry slip ▲

HYDRAULIC LIFTS
straddle bases are up to 50-in. wide



Functional improvements incorporated in Big Joe hydraulic lifts for either manual or battery operation fa-facilitate handling bulkier loads with greater safety. Forks, adjustable in any position to widths providing best support for the load, are furnished in lengths from 25 to 36 in. and load at floor level. Straddle type base comes in range of widths up to 50 in. Rear swivel casters and front roller bearing wheels afford maximum maneuverability. Dual ground-gripping brakes are operated by hand lever. Optional remote control unit on battery models allows operator to travel with load. which can be up to 1000 lb. Made by **Big Joe Mfg. Co.**, 908 W. Jackson Blvd., Chicago 7, Ill.

▲ For more details circle NED-768 E3 on enclosed inquiry slip ▲

Sanitor TISSUE TOILET SEAT COVERS

SEE FOR YOURSELF ABSOLUTELY FREE!

Limited to industrial users only! Free of charge, no obligation: (1) Sanitor metal dispenser with exclusive one-at-a-time ejector; (2) Supply of Sanitor tissue toilet seat covers. Yours to keep. See how efficiently Sanitor solves serious restroom problems.

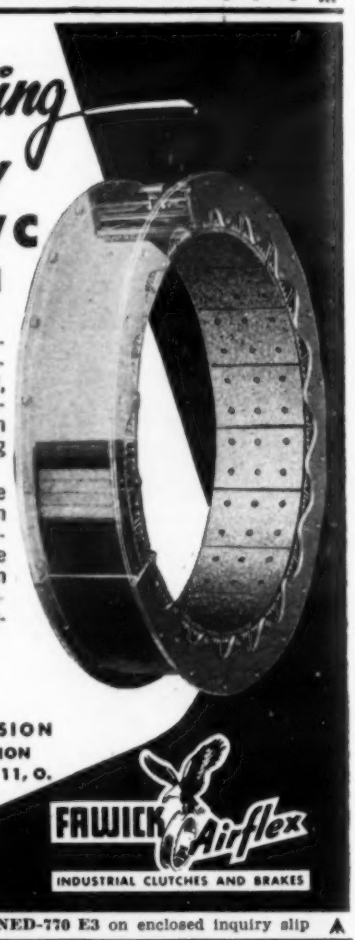
- **END RESTROOM ANXIETY** As all personnel executives know, happier workers are more efficient, produce more. No matter how clean you keep your restrooms, there is always a lingering fear of infection. Sanitor tissue toilet seat covers assure hygienic conditions. Employees, visitors too, appreciate this indication of respect for their decency.
- **END PLUMBING STOPPAGES** Flushing automatically disposes of Sanitor tissues . . . *can't* clog drains. No mess, no litter. Restrooms stay cleaner longer.
- **ELIMINATE WASTE** Stop use of toilet tissues and paper towels as makeshift seat covers. This saving *alone* more than pays for Sanitor covers!

WRITE for free Sanitor dispenser, tissue toilet seat covers and literature.

SANITOR MFG. CO., Dept. 6
Kalamazoo, Michigan

▲ For more details circle NED-769 E3 on enclosed inquiry slip ▲

Announcing THE *NEW* FAWICK VC CLUTCH



● The NEW FAWICK VC Air-Ring CLUTCH design features include: cooler operation, riveted, easily-replaced lining, loose, expanding operating tube which can be replaced without removing clutch from shaft.

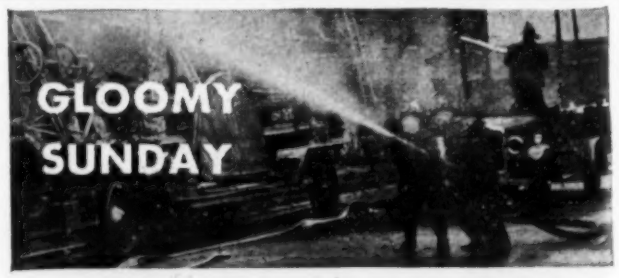
This NEW FAWICK Rigid-Type VC CLUTCH is unmatched on heavy-duty service for high-starting load and sustained slippage conditions. Its cooler operation provides "new clutch" performance throughout a long maintenance-free life.

Write for Bulletin ML-102

FAWICK AIRFLEX DIVISION
FEDERAL FAWICK CORPORATION
9919 Clinton Rd. • Cleveland 11, O.

FAWICK Airflex
INDUSTRIAL CLUTCHES AND BRAKES

▲ For more details circle NED-770 E3 on enclosed inquiry slip ▲



GLOOMY SUNDAY produced excitement for the fire department and a crowd of spectators who watched fire rage through a chemical plant.

GLOOMY SUNDAY turned into Black Monday when management came to the stunning conclusion that the company was ruined—that it would take many months before it could be rebuilt and resume business. The Fire Bureau's report that the cause was "Watchman Failure" did nothing to lift the gloom.

GLOOMY SUNDAY might have been like any other day if the company had taken the precaution to install a DETEX tape-recording GUARDSMAN Watchclock. The GUARDSMAN operates for as long as 96 hours without requiring anyone to cut the tape. The GUARDSMAN assures you unfaltering Watchman supervision on weekends as well as on week days.

Get the facts. Write for free GUARDSMAN folder and make sure your company is spared a gloomy Sunday.

DETEX WATCHMENS CLOCKS

PATROL
ALERT
ECO
NEWMAN
GUARDSMAN

DETEX WATCHCLOCK CORPORATION
Dept. N-5
76 VARICK STREET, NEW YORK 13, N.Y.
Sales and Service in All Principal Cities

▲ For more details circle NED-771 E3 on enclosed inquiry slip ▲

NEW INDUSTRIAL HUMIDIFIER

BAHNSON TYPE E Self-Contained Unit Humidifier

Requires only water supply and electrical connection

NOTE THESE FEATURES!

- HIGH CAPACITY—Evaporates 3 gallons per hour with ¼ HP motor.
- AUTOMATICALLY CONTROLLED at any desired relative humidity.
- SIMPLE TO INSTALL—Just uncrate and suspend from ceiling.
- ELECTRIC MOTORS for all common current characteristics.
- WATER SUPPLY connection for ¼" tube or ⅛" pipe provided.
- NEEDS NO pump, duct, compressed air, steam, drain or floor space.
- EFFICIENT centrifugal atomization of ordinary city water.
- TWO MODELS, ¼ HP for high capacity, ⅛ HP for small rooms.

FOR COMPLETE HUMIDIFICATION SYSTEMS, FOR BOOSTING, FOR SPOT HUMIDIFICATION, FOR LABORATORIES

FOR TRULY DEPENDABLE LOW-COST HUMIDIFICATION Bahnson Company ENGINEERS AND MANUFACTURERS WINSTON-SALEM, N. C.

For more details circle NED-772 E3 on enclosed inquiry slip

vibration control for 80 tons of machines

...INCLUDING PRESSES

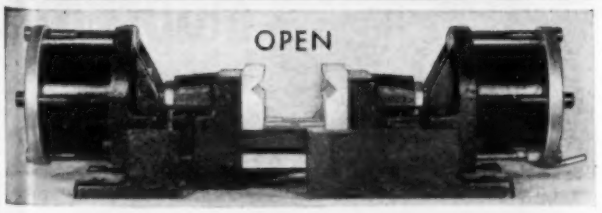
It pays to keep a standard package of ten Isomode Pads in stock. Costs less that way—and then you always have it on the spot for installing machinery—up to 80 tons of it. Supporting up to 50 lbs/sq. in., Isomode Pads really make a difference in plant operations. Here's how: (1) No need to bolt to any type of floor. Machines stay put. (2) Isomode Pads help reduce noise level, increase comfort. (3) Less disturbance to offices or adjacent equipment. (4) Less damage to building, less strain on machines, less maintenance. Write for data.

*Trade Mark Reg. U.S. Pat. Off.

THE MB MANUFACTURING COMPANY, INC. 1066 State St., New Haven 11, Conn.

For more details circle NED-773 E3 on enclosed inquiry slip

BLACK "CENTR-FINDER" VISE



A Precision TOOL

designed to locate centers or other pre-determined points regardless of shape or varying sizes of parts within .001" horizontally or vertically.

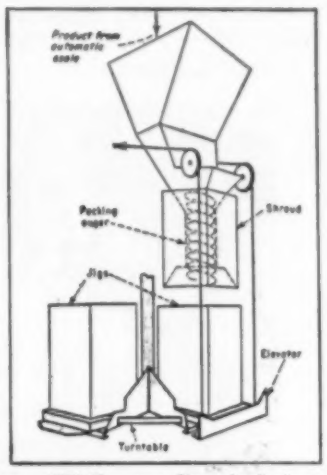
Vise jaws travel on guides—actuated by opposed double-acting cylinders—synchronized by mechanical means. Force exerted is all straight line. Clamping pressures up to 2000 pounds. No pressure exerted through synchronizing mechanism. Working range 0 to 4". For centering, drilling, chamfering, hollow milling, deburring, reaming and many other production operations.

write FOR BULLETIN

BLACK DRILL CO., INC. • 1380 E. 222nd St. • Cleveland 17, Ohio

For more details circle NED-774 E3 on enclosed inquiry slip

BULK PACKER weighs and delivers 1-ton cartons



Such bulk products as synthetic resins, powders, lime and cements can be weighed and delivered to giant size cardboard boxes by this bulk packer. A two-man crew can turn out one 2000-lb box, fully packed and ready to ship, in 3 minutes. Basic units are hopper scale for weighing the product loading hopper, turntable that holds four 3 x 3 x 5-ft boxes and a packing auger. While one box is being filled, the other boxes are being prepared, strapped or taken off the turntable. Cartons, designed by Container Corp. of America, are supported on all sides, top and bottom, and can be collapsed and returned for reuse. Made by **Richardson Scale Co.**, Van Houten Ave., Clifton, N. J.

For more details circle NED-775 E3 on enclosed inquiry slip

FIRE EXTINGUISHERS are portable carbon dioxide type

Squeeze type valves and lightweight cylinders are featured by Fyre-Freez line of portable carbon dioxide fire extinguishers available in 2½, 5, 10, 15 and 20-lb models. Valves require only normal hand pressure to actuate extinguisher after safety pin is removed. Recharging is done the same way. Approved for use on Class B (flammable liquid) and Class C (electrical equipment) fires, CO_2 is clean and noncorrosive, will not conduct electricity and is eventually absorbed into the atmosphere, leaving no mess to be cleaned up. Extinguishers are approved by Underwriters' Laboratories and Factory Mutual Laboratory. Made by **Walter Kidde & Co.**, Fyre-Freez Div., Dept. A, 675 Main St., Belleville 9, N. J.

For more details circle NED-776 E3 on enclosed inquiry slip

DO YOU KNOW? Carbon steel specifications can be identified in seconds with file-size durable cardboard chart "Government Specification Analyses." Chart shows chemical analysis requirements for each of 60 Military, Army, Navy, Aeronautical and Federal specifications. Also listed are specified forms such as sheets, bars, strip and wire, as well as the nearest corresponding SAE, AISI and AMS type numbers. Card is offered free by Peter A. Frasse & Co., 16 Grand St., New York 13, N. Y.

For more details circle NED-777 E3 on enclosed inquiry slip

The Original...

Fafnir Wide Inner Ring Bearing with Self-Locking Collar and Mechani-Seals

A Time-Tested and Proven Feature of Fafnir Ball Bearing Power Transmission Units

Counterbored, eccentric cam, mated construction of collar and inner ring assures positive locking action without set screws, lock nuts or adapters

FAFNIR BALL BEARINGS

Most Complete Line in America

THE FAFNIR BEARING COMPANY, NEW BRITAIN, CONN.

For more details circle NED-778 E3 on enclosed inquiry slip

Aerovent FAN BELTED DUCT FAN

KEEPS MOTOR OUT OF AIR STREAM

For Foundries, Paint Spray Booths, Sanding, Acid Tank Rooms, etc. where fan motors must be protected.

Aerovent Belted Duct Fans with "Macheta" design handle maximum air with minimum use of power. Sizes 12" to 84"; 2, 4, or 6 blades. All fans furnished with ball bearing motors suitable for mounting in any position. Easily installed. For many applications.

Certified Ratings CR PFMA

Other Models: Direct Connected Man Cooling, Extended Shaft, Duct Type, Pulley Drive.

Write today for ENGINEERING BULLETIN

AEROVENT FAN CO., INC. ASH AND BROWN STREET, PIQUA, OHIO

Sales Engineers in Principal Cities

For more details circle NED-779 E3 on enclosed inquiry slip

NEW!

Atlas CLAUSING PRECISION MACHINE TOOLS DIVISION ATLAS PRESS COMPANY KALAMAZOO, MICHIGAN U.S.A.

18" HEAVY DUTY POWER FEED DRILL PRESS

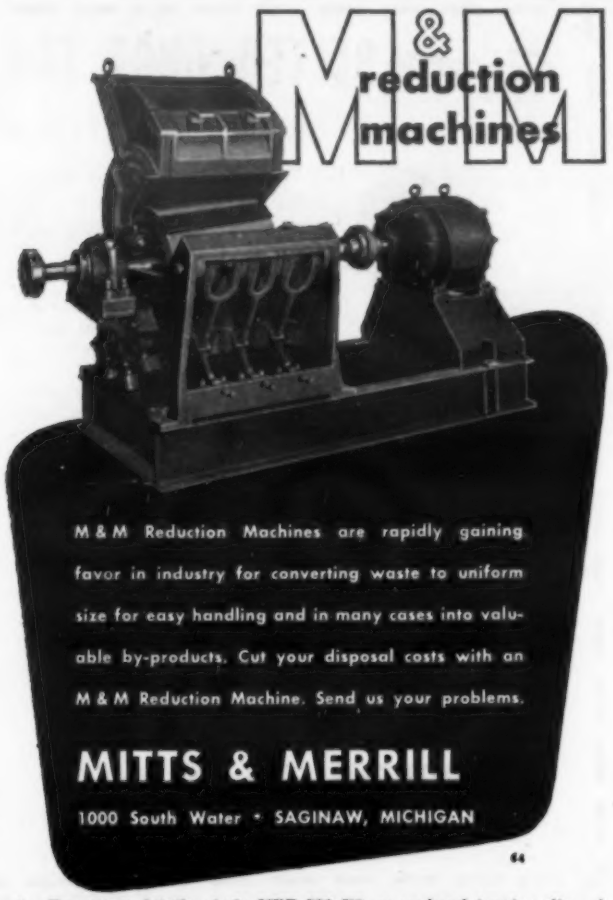
- ★ Drills 1" cast iron, ¾" steel
- ★ No. 3 Morse Taper, 6½" spindle travel
- ★ HEAVY-DUTY GEAR-DRIVEN POWER FEED TO TAKE FULL ADVANTAGE OF THIS BIG TOOL AND JOB CAPACITY

An 18" *heavy-duty* drill press, with larger tool and job capacity, PLUS a *heavy-duty* GEAR-DRIVEN power feed to make effective use of its capacity—those are the brief facts about this fine new Clausing development.

The power feed, with its large heavy-duty gears, is positive and sure—NO belt slippage to reduce power. Feed selection is instant—BY DIAL—no belts to change. Add the Clausing features of new spindle bearing engineering, vernier depth stop, and exclusive head and table positioning mechanism—and you know this is a tool that can save you plenty on both set-up and operating time. Get all the facts—send for new literature today.

CLAUSING DIVISION ATLAS PRESS COMPANY 5-113 N. PITCHER ST., KALAMAZOO, MICHIGAN

For more details circle NED-780 E3 on enclosed inquiry slip



For more details circle NED-781 E3 on enclosed inquiry slip

CONVEYOR SWITCH
device is air actuated

Time, space and manual effort can be saved by this air-operated switch section for conveyor lines where heavy packages must be diverted to any one of sev-

eral lines. Pushbutton controlled unit can be located to direct the flow in accordance with the operator's wishes. Switch section is offered in various sizes and styles to meet specific jobs. Made by **Alvey Conveyor Mfg. Co.**, 9259 Olive Street Rd., St. Louis 24, Mo.

For more details circle NED-784 E3 on enclosed inquiry slip

THE PROBLEM

How to weigh large castings conveniently and accurately.

This 35 ton steel casting was easily weighed by placing three Baldwin SR-4 Load Cells under it.

THE BALDWIN SOLUTION

Baldwin SR-4 devices enabled a large Eastern foundry to weigh faster and more accurately this huge semi-rotor, built for a Canadian hydro-electric plant. Three 50,000 lb. SR-4 Type C Load Cells were used. Output of each cell ran to an SR-4 manual null-balance indicator. Here each cell was read separately and totalled; other cases might better use an SR-4 weighing system electrically adding cell outputs.

Baldwin SR-4 devices have *uses unlimited* in industry . . . measuring load, pressure or torque economically, speedily and accurately. For latest technical information write to Dept. 3129, Baldwin-Lima-Hamilton Corporation, Philadelphia 42, Pa.

TESTING HEADQUARTERS

BALDWIN-LIMA-HAMILTON

General Offices: Philadelphia 42, Pa. • Offices in Principal Cities

For more details circle NED-788 E3 on enclosed inquiry slip

PALLET RACK
designed to fit user's pallets

Ease of adjustment is feature of this pallet rack which is designed to dimensional specifications of user's pallets. Rack has overall dimensions of 60 x 60 x 120 in. and can be furnished with extra heavy tubular supports or solid shelves. Heavy gage upright members are notched on 6-in. centers from 14 to 98 in. Shelves can be quickly moved up or down without tools. Furnished knocked-down in single face, double face, single entry or double entry groups, unit will support up to 3000 lb per shelf. Weld nuts and interchangeable parts afford easy erection in the field. Made by **Republic Steel Corp.**, Berger Mfg. Div., 1000 Belden Ave. N.E., Canton 5, O.

For more details circle NED-785 E3 on enclosed inquiry slip

Drive out
FOUL AIR
Blow in
FRESH AIR
with Coppus Type A Ventilator

Assure greater safety, comfort for workers . . . get greater efficiency.

Drive out dangerous fumes, gases, stagnant or hot air from boilers, cable manholes, tanks, vats and other confined places. *Supply fresh air continuously.*

Send now for further information. Coppus Engineering Corporation, 405 Park Avenue, Worcester 2, Mass.

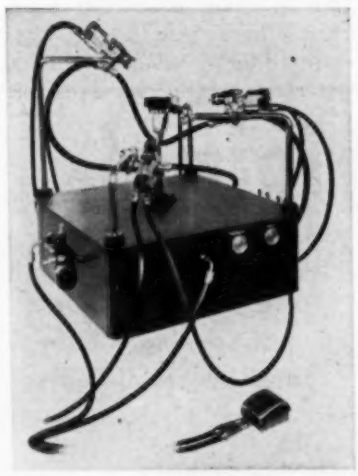
MANHOLES made safe for workers' entrance within minutes.

BOILER AND TANK INTERIORS cooled by Coppus. Fresh air supplied continuously.

ANOTHER COPPUS "BLUE RIBBON" PRODUCT

For more details circle NED-782 E3 on enclosed inquiry slip

PAINTING MACHINE
for use in standard spray booths

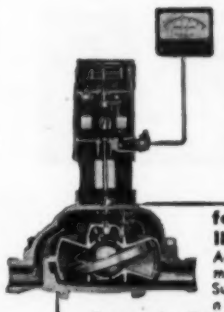


Automatic, single-spindle painting machine designed for short runs is produced as a portable package and can be used in most standard spray exhaust booths. One dial regulates spindle speed from 100 to 400 rpm, while second dial controls length of time spray guns operate. Spindle and guns are activated at touch of foot pedal, but stop automatically as predetermined by dial settings. Provision is made for mounting up to four guns, one in each corner as required. Work-holder can also serve as masking device. Automatic oiling of drive motor is provided for. Made by **Conforming Matrix Corp.**, 338 Factories Bldg., Toledo 2, O.

For more details circle NED-786 E3 on enclosed inquiry slip

viscosities unlimited

HAYS VERIFLOW METER AND HAYS ELECTRONIC VERITROL
indicate and control liquid flow



Now virtually all fluids can be precisely measured and controlled—*from a remote position.*

Hays VERIFLOW meter accurately measures, indicates, and totals the flow of corrosive and hard-to-meter liquids without using weigh tanks, orifice plates, or gage sticks. With the Hays VERITROL you simply set a knob at the rate of flow desired . . . then, the VERITROL controls the flow of liquid at that set-rate. *Send for Pub. No. 53-766-38.*

for corrosive liquids
Acetic Acid, Aluminum Potassium Sulphate, Ammonia, Calcium Compounds, Carbolic Acid, Formaldehyde, Fruit and Vegetable Juices, Hydrogen Peroxide, Phosphoric Acid, Potassium Hydroxide, Sodium Compounds, Sulphuric Acid (concentrated), Stearic Acid, and many others.

THE hays CORPORATION
MICHIGAN CITY, INDIANA

For more details circle NED-789 E3 on enclosed inquiry slip

LOOK

FREE fan catalog for '53!

New models, new finishes have been added to the Emerson-Electric fan line—most complete fan line in America. See these fans for every commercial, industrial and institutional use. For free catalog write Dept. 710.

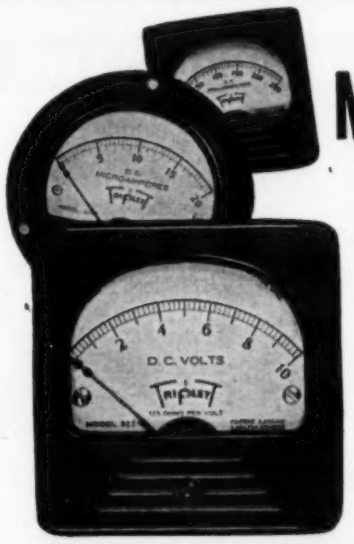
THE EMERSON ELECTRIC MFG. CO.
St. Louis 21, Mo.

EMERSON ELECTRIC
FANS • MOTORS APPLIANCES

For more details circle NED-783 E3 on enclosed inquiry slip

DO YOU KNOW? Workers in a large carbon plant are now being supplied with a lotion originally developed by Sutton Cosmetics, Inc. as a substitute for stockings during the nylon shortage. This lotion seals the pores of their faces so that airborne carbon and pitch particles cannot clog them. Previously, sun and wind acting on the carbon in skin pores produced irritation. The lotion is removed easily at quitting time by employees of Speer Carbon Co., Dept. ED, St. Marys, Pa.

For more details circle NED-787 E3 on enclosed inquiry slip



MODERNIZE WITH TRIPLETT METERS

A SIZE, TYPE, AND STYLE FOR EVERY INSTALLATION

Your instrumentation is strictly modern in design and construction with Triplett Meters. You can have sizes 2" to 7" in a wide variety of case shapes and mounting arrangements, A.C., D.C., R.F., Rectifier or Dynamometer. Molded and metal cases, rear illumination, and other special features are available. For precision and economy virtually every meter part is made in Triplett plants under rigid humidity and dust control. Every meter represents the refinements gained in half a century of meter experience. Keep *your* panels up-to-the-minute with Triplett Meters—famous the world over for quality, accuracy, and dependability.

Triplett Electrical Instrument Co.
Bluffton, Ohio, U.S.A.

FOR THE MAN WHO TAKES PRIDE IN HIS WORK
Triplett
TRIPLETT ELECTRICAL INSTRUMENT CO. BLUFFTON, OHIO, U.S.A.

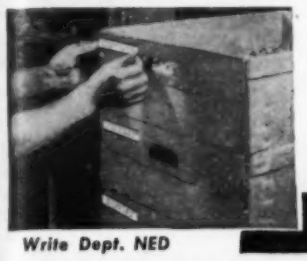
For more details circle NED-790 E3 on enclosed inquiry slip

WON'T SMUDGE • RESISTS: DIRT GREASE WATER ACIDS

LABELON PLASTIC Write on it TAPE

STICKS WITHOUT MOISTENING

FOR MAINTENANCE STOCKROOM, ROUTING, OFFICE etc.



Write Dept. NED

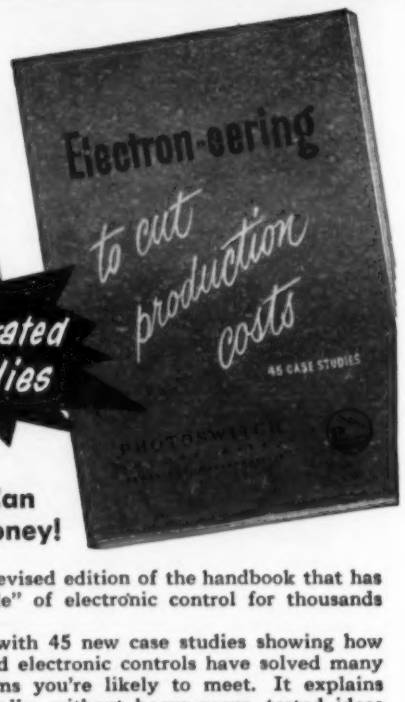
Nothing else like LABELON—the amazing "Write on it" plastic tape! Use it to label stockroom shelves, bins, tools, hard-to-mark parts; for indicating rejects and service department repairs; for marking laboratory equipment, supplies, experiments; for panel boards or wiring; for office files, folders, etc.

LABELON TAPE sticks without moistening to any smooth, clean surface—yet can be quickly removed. Resists heat up to 160°. Just write on it with pencil or stylus—message won't smudge. Choice of widths and colors. Handy dispenser with cutter bar. *See your nearest dealer, or write for sample and prices.*

LABELON TAPE CO., INC.
450 Atlantic Ave., Rochester 9, N. Y.

For more details circle NED-791 E3 on enclosed inquiry slip

New! Enlarged! Simplified!



45 illustrated case studies

These Facts Can Save You Money!

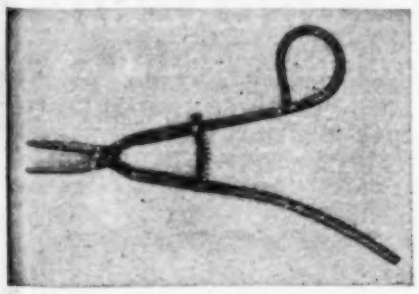
A completely revised edition of the handbook that has become the "bible" of electronic control for thousands of engineers.

Newly edited, with 45 new case studies showing how standard packaged electronic controls have solved many industrial problems you're likely to meet. It explains clearly and factually, without hocus-pocus, tested ideas for achieving efficiency through "Electron-eered" counting, weighing, measuring, timing and cycling — broadly applied to industries — completely indexed.

JUST OFF THE PRESS RESERVE YOUR COPY NOW!

Write: PHOTOSWITCH INC.
Dept. NA 5, 77 Broadway
Cambridge 42, Mass.

For more details circle NED-792 E3 on enclosed inquiry slip

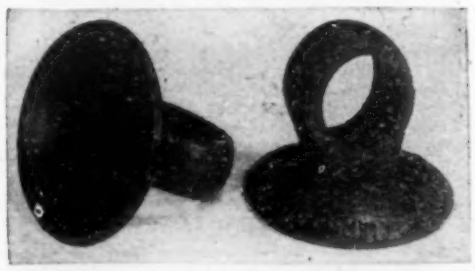


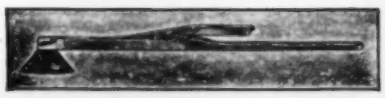
No. 9 Drop Forged Safety Tongs and Punch Press Feeders . . . can be reheated and shaped to suit operation. Coil springs between handles keep jaws open for quick handling together with light weight (nine ounces) . . . relieves wrist fatigue. Length over all nine inches.

FINGER SAVING DEVICES

No. 2 Vacuum Lifters speed the job and save the fingers . . . make handling of sheet metal faster . . . avoid hand and finger lacerations . . . eliminate problem of vacuum between sheets . . . used with or without gloves.

Ipco Vacuum Lifter (illustrated below) . . . constructed of light weight duralumin. To operate: strike sheet or blank with a quick blow, producing a vacuum in the cup that makes it hold fast to the object. To release: depress lever which unseats valve and breaks vacuum.



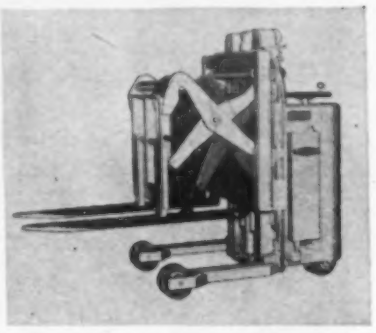


Send for 140-page catalog titled "Everything for Safety".

The BOYER-CAMPBELL Company
6538 St. Antoine St., Safety Division Detroit 2, Michigan

For more details circle NED-793 E3 on enclosed inquiry slip

ELECTRIC TIERING TRUCK forks reach out to pick up load

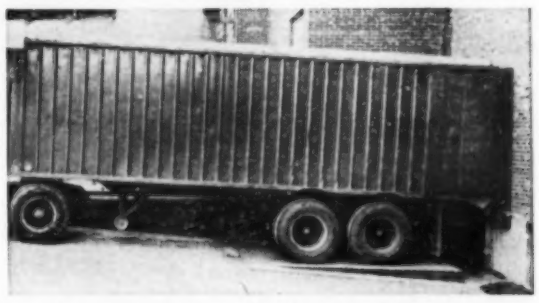


Anxious to do its job, this electric tiering truck is equipped with forks that reach out 24 in. to pick up or deposit the load. Called the Reach-Fork, it will right-angle tier from any 6-ft aisle due to its fork action, short length and off-set drive wheel with 200-degree turning arc. Pallets of any size can be handled without truck changes. They can be stacked close together as no space is needed between loads to accommodate the base forks. Trucks can be operated on low-capacity elevators and floors because it has no counterweight. Other features include 51-in. freelift, 10 x 5-in. load wheels, roller mounted 12-v battery, knee-action swivel casters and 2000-lb capacity. Made by **Raymond Corp.**, 41-102 Madison St., Greene, N. Y.

For more details circle NED-794 E3 on enclosed inquiry slip

TRUCK & TRAILER ELEVATOR adjusts carrier to dock height

Powered by heavy-duty electric hydraulic system, the Adjust-A-Truck will raise or lower any vehicle to dock height and is useful where space shortage



makes it impossible to install adjustable dock ramps. Capacity is 40,000 lb, and standard strokes available are 18 in. and 24 in. Standard deck size is 10 ft wide x 12 ft long. The control unit is a push-button wall-mounted type and is designed for a 110-v control circuit. Made by **Rowe Methods Inc.**, Dept. A, 2534 Detroit Ave., Cleveland 13, O.

For more details circle NED-795 E3 on enclosed inquiry slip

DO YOU KNOW? The dynamic story of brass manufacturing is brought to the screen with the release of a 16-mm sound-color motion picture entitled "Brass Means Business." All phases of the production of brass and bronze from the base metals to the finished products are depicted, with each step along the route being clearly explained. Film is available for showings to industrial groups by applying to Titan Metal Mfg. Co., Bellefonte, Pa.

For more details circle NED-796 E3 on enclosed inquiry slip

modernize materials handling with

CARGOTAINERS

Cargotainers are designed to keep pace with modern methods of materials-handling because they are: 1. Sturdy and resistant to shock; 2. Readily folded when not in use; 3. Open mesh so that contents may easily be seen for quick inventory; 4. Efficiently designed for shipment, assembly line use, and vertical storage. Write for information concerning the new CLEARVIEW model with its exclusive base construction for greater durability and better locking and stacking. Dept. NED, Pittsburgh Steel Products Co., Grant Bldg., Pittsburgh 30, Pa.

Pittsburgh Steel Products Company
A Subsidiary of Pittsburgh Steel Company

For more details circle NED-797 E3 on enclosed inquiry slip

G-E Type HP Pyrometers Provide Reliable Control

FEATURES
- Easy maintenance
- Sturdy construction
- Accurate within ¾ of 1% full scale
- Choice of temperature range up to 3000 F

Contact your nearest G-E representative or write Section 602-258 General Electric Co., Schenectady 5, New York.

GENERAL ELECTRIC

For more details circle NED-798 E3 on enclosed inquiry slip

You Just Can't File Away These Problems . . .

BLAST CLEANING

. . . of bridges, buildings, tanks, structural work

Pangborn Blast Cleaning Machine—Cleans tanks, bridges, structures quickly and economically. Ideal for maintenance and other jobs, such as removal of dirt, rust, etc. Six sizes, stationary or portable, $187 and up.

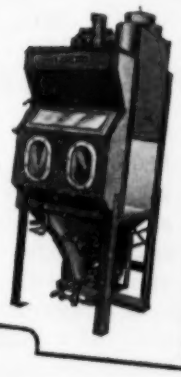
. . . of small castings, forgings, stampings, heat treated parts,

Pangborn Blast Cabinet—Saves time and money in cleaning small metal parts, removing rust, scale, grime, old paint, etc., in a few seconds. Perfect for producing clean, smooth surfaces on pieces 60" x 35" in size. Models from $319 and up.

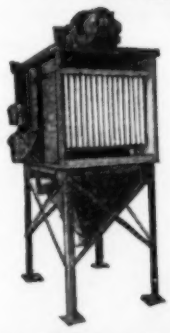
PRECISION FINISHING

. . . of molds, dies, tools

Pangborn Hydro-Finish Cabinet—Removes scale and directional grinding lines . . . holds tolerances to .0001" and prepares surfaces for painting or plating. Liquid blast reduces costly hand cleaning and finishing of molds, dies, tools, etc. Models from ..... $1410 and up.



CONTROLLING DUST



. . . at the source of origin

Pangborn Unit Dust Collector—Traps dust at the source. Reduces maintenance costs . . . keeps plant clean and improves community relations. Allows reclamation of valuable material. Models from .....$286 and up.

BUT YOU CAN MAIL THIS COUPON TO PANGBORN FOR HELP IN SOLVING THEM!

Pangborn

Look to Pangborn for the latest developments in Blast Cleaning and Dust Control equipment

☐ Blast Cleaning Cabinets
☐ Blast Cleaning Machines
☐ Unit Dust Collectors
☐ Hydro-Finish Cabinets

PANGBORN CORP., 2400 Pangborn Blvd., Hagerstown, Md.
Gentlemen: Please send me more information on the equipment I've checked. To be used for.....
.....
Name .....
Company .....
Address .....
City .....Zone....State.....

For more details circle NED-799 E3 on enclosed inquiry slip

The Name Clark . . . a 99 year old part of America's heritage, has always been known to be dependable . . . "For Greater Security Fasten Fast with Clark Fasteners".

Clark products are yours for *dependability* and yours for *workability*.

They *work* with you and *work* for you.

Uniformity of Quality and Finish have made the name Clark outstanding. For information write to 135 Canal Street.

CLARK BROS BOLT CO. MILLDALE, CONN. 6-0-2

Export Dept.: Suite 513 25 Beaver St., N. Y. 4, N. Y. WHitehall 4-4392

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Loading Dock...or Parking Lot?

. . . one of Magliner's 34 Standard Dock Boards will load Your Trucks

FASTER . . . SAFER . . . AT LOWER COST!

Magliner standard magnesium dock boards insure swift in-and-out truck movement . . . prevent valuable loading areas from becoming costly parking space! Magliner's 34 load-engineered standard models provide a low-cost link between truck and dock for virtually all truck docks . . . eliminate the need for expensive, custom-made equipment. Get smooth, rapid material flow from carrier to plant . . . keep trucks on the move! Gain substantial reductions in loading and unloading costs! Equip your truck docks with *magnesium*-light, *magnesium*-strong Magliner standard dock boards! Write today for bulletin DB-203.

MagLiner STANDARD MAGNESIUM DOCK BOARDS

Light! Strong! Safe!

Adjustable To Varying Heights and Spans

WRITE FOR BULLETIN DB-203!

Exclusive AUTOMATIC DROP LOCK (pat. applied for)

• Positive Lock Prevents Slippage
• Quickly . . . Easily Adjustable

Custom-Engineered Dock Boards Also Available — Write For Information

MAGLINE INC. • P.O. BOX 396 • PINCONNING, MICHIGAN

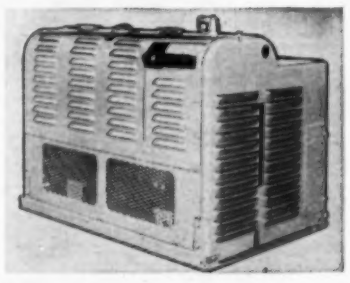
▲ For more details circle NED-801 E3 on enclosed inquiry slip ▲

PARTS PICK-UP CONVEYOR can be built to specification

Finished parts from screw or bolt machine, punch presses or other equipment are picked up at floor level by the Erco pick-up conveyor and loaded into handling or shipping containers away from processing area. Parts travel on table-top chain belt with pocket-forming risers and are lifted up incline to be dropped into containers or onto conveyor line. Congestion around machines is thus eliminated. Standard, packaged, self-contained unit is shown. Other units can be built to various length, height and incline specifications and can be equipped with variable speed drive for timed flow to conveyor lines. Made by **Steel Products Fabricators,** Dept. N, 12032 S. Emerald Ave., Chicago 28, Ill.

▲ For more details circle NED-802 E3 on enclosed inquiry slip ▲

DIESEL-ELECTRIC UNIT for electric industrial trucks

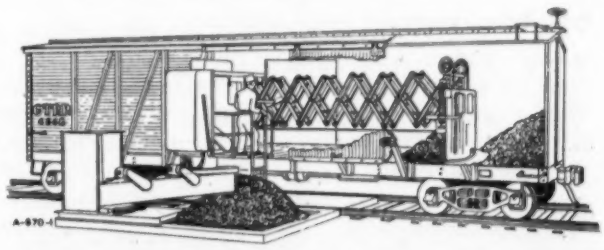


Quick interchangeability of power units, easy-to-operate standard electric controls and low operating cost per ton mile are features of line of diesel-electric continuous duty power units for electric industrial trucks. Model N unit (illustrated) is for use with fork trucks of 4000 to 6000 lb capacity and platform trucks up to 10,000 lb capacity. Made by **Ready-Power Co.,** 3832 Grand River Ave., Detroit 8, Mich.

▲ For more details circle NED-803 E3 on enclosed inquiry slip ▲

BOX CAR UNLOADER operates in cars on adjacent tracks

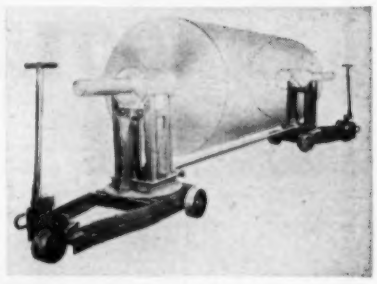
Grain, dry chemicals, sand, cement and other bulk materials up to 2-in. lump size handled in box cars can be unloaded by the S-A box car unloader. This



model is designed for operation between two tracks, making it possible to move directly from one car to another on an adjacent track. Pantograph arm equipped with a scoop reaches into the car until it meets an obstruction, drops down and withdraws a load of material. It is discharged into a track-side hopper. Cycle continues automatically, the single operator only directing the arm to different sections of the car. Made by **Stephens-Adamson Mfg. Co.,** 12 Ridgeway Ave., Aurora, Ill.

▲ For more details circle NED-804 E3 on enclosed inquiry slip ▲

BEAM & ROLL HANDLING TRUCK for loads up to 15,000-lb capacity



Handling of heavy and long rolls or beams as used in textile or paper mills is facilitated by this specially designed floor truck. Unit shown was made for loads up to 15,000 lb. Hard wood V-blocks which prevent damage to rolls are mounted on dual steel turntables connected at their base by tubular member. Load is kept in line for straight and corner traction and maximum maneuverability. By varying length of connecting rod, turntable dollies can accommodate various length rolls or beams. Made by **Lewis-Shepard,** Dept. R-11, Watertown 72, Mass.

▲ For more details circle NED-805 E3 on enclosed inquiry slip ▲

"ABSORBAND" FELT SWEAT BAND stops hot weather perspiration hazards

Hot weather perspiration brings discomfort to industrial workers, slows down work, and results in the loss of valuable labor hours.

The Sellstrom felt sweat band here illustrated largely overcomes perspiration hazards. It absorbs perspiration and prevents the forehead moisture from running into the eyes. The cost is so low that in labor saved every sweat band can pay for itself several times in a single day. Here are the "Absorband" recommended styles:

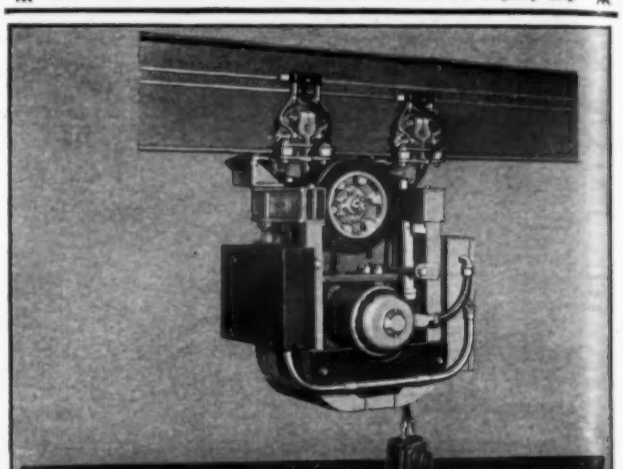
No. 440 "Absorband" for General Use. Made from the finest obtainable absorptive white felt, treated to absorb a great deal more perspiration than ordinary felt. When saturated with perspiration, it can easily be rinsed in water, wrung out, and it is again ready for use. The felt fits the forehead and is kept in place by a flat elastic band. Low cost permits liberal use.

No. 442, for Welding Helmet of Face Shield. Made of genuine leather, padded with felt. Can quickly be attached to any helmet or face shield headgear having a 1¼" band. Packed in individual envelopes. You yourself would not wear a hat without a sweatband. Why ask your workmen to wear helmets or face shields without a sweatband?

No. 443. Same as No. 442, but for ⅞" headgear.

When ordering, be sure to specify the Style No. or width of head band on the headgear of a helmet or face shield. Order from your dealer, or write us direct for price and sample. **Sellstrom Manufacturing Company,** 654 North Aberdeen Street, Chicago 22, Ill. *Advt.*

▲ For more details circle NED-806 E3 on enclosed inquiry slip ▲



A NEW Heavy Duty MONOTRACTOR

To meet unusual requirements such as extremely heavy grades, speed or duty-cycle, this MonoTractor Drive Unit offers a wide variation of control motor applications including fluid drive; adjustable spring loaded drive suspension, heavy duty 4" x 12" rubber drive wheel and extremely compact fabricated frame construction. It can be applied for propulsion of 5-ton loads on electric hoist or other carriers operating on MonoRail track having a smooth bottom flange.

SEND FOR BULLETIN AD-1

THE AMERICAN MONORAIL COMPANY

13116 Athens Avenue • Cleveland 7, Ohio

▲ For more details circle NED-807 E3 on enclosed inquiry slip ▲

THREAD BROACHING ENDS TAPPING TROUBLES

Ultra Precision THREAD-CUTTING BROACHES deliver these advantages:

• End tapping troubles
• Produce threaded holes by a Shearcutting action.
• Are practically unbreakable
• Ground from hardened high-speed solid blanks.
• Require only half the power needed for tapping.
• Have an amazing long life.
• May be resharpened many times
• Feed the chips out of the hole
• Lower production costs
• Replace standard taps in most sizes.

SHEARCUTTER TOOLS COST LESS IN THE LONG RUN

These ultra-scientific cutting tools are used by practically every large manufacturing company in the U.S.A. Constant repeat orders prove their merit and value.

Patent Warning: All Shearcutter Tools are protected by U.S. and Foreign Patents, received, pending or applied for

*ANOTHER AMAZING INVENTION OF RALPH GORDON FEAR

SHEARCUT TOOL CO.

MANUFACTURERS OF THE WORLD'S MOST SCIENTIFIC CUTTING TOOLS

7041-7045 Darby Avenue Dept-NE-53 Reseda, Calif. (L.A. County)

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WATER PROBLEM? save 95% of your cooling water

with Acme towers

Whether your water supply problem is for one molding machine or for the air conditioning of the entire plant Acme has a cooling tower tailored to fit your needs. All Acme Towers are engineered and designed for the basic purpose of reducing by more than 95% the amount of water used without a tower.

Acme JCT models are small, compact and highly efficient. They are galvanized for indoor or outdoor operation. Capacities range from 3 to 12 tons.

For the bigger jobs you'll need Acme ACT models with capacities ranging from 8 to 60 tons.

Write for bulletin giving data on Acme's complete line of Cooling Towers.

ACME INDUSTRIES, INC.
JACKSON, MICHIGAN

Continuously serving the Refrigeration and Air Conditioning Industry since 1919

▲ For more details circle **NED-809 E3** on enclosed inquiry slip ▲

FREE BOOKLET... Mounted wheels and other abrasive products for portable and internal grinding

Source: THE CARBORUNDUM COMPANY
Niagara Falls, New York

Here's valuable help for users of high speed portable and internal grinding equipment. A new 32-page booklet designed to help you select the correct abrasive product to improve workmanship and reduce production costs.

This booklet, "Mounted Wheels and Related Abrasive Products," tells you what gradings to use for roughing or finishing specific metals or materials. It covers silicon carbide and aluminum oxide mounted wheels, "MX" mounted wheels, and coated abrasive products—all made by CARBORUNDUM, your *only* source for *every* abrasive product.

All standard mounted wheel shapes are illustrated; wheel dimensions and mandrel sizes listed. A handy chart shows the coarse grit limits for each shape in "MX" and in each of the three bonds used: vitrified, resinoid, and rubber.

The coated abrasives section gives you complete information on Cloth Discs, Cartridge Rolls, "Nolap" Cloth Sleeves, and Industrial Cloth Sleeves.

Get your free copy of this helpful booklet. Send for it today—use the inquiry form provided by this magazine, or write us at Dept. NED 81-311.

For help with any abrasive problem, call upon your CARBORUNDUM distributor or salesman.

"Carborundum" and "MX" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, N. Y.

81-311

▲ For more details circle **NED-810 E3** on enclosed inquiry slip ▲

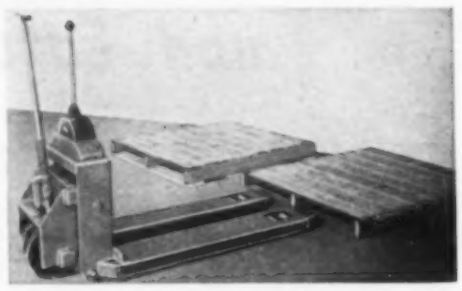
DON'T WASTE MAN HOURS

Get more productive hours by reducing lost time in handling materials. One man, with the aid of a "Canton" Portable Crane, can lift and transport up to 3 tons of material to any part of the plant! For more details on saving man-hours, write today for Bulletin 51.

The HILL ACME CO.
"CANTON" DIVISION 1201 W. 65TH ST., CLEVELAND 2, OHIO

▲ For more details circle **NED-811 E3** on enclosed inquiry slip ▲

COMBINATION PALLET TRUCK for single and double face pallets



Both single and double faced pallets are handled interchangeably by this model SD hand lift truck. It has full 4-in. lift and can be furnished with hinged adapters for skid platforms having up to 12-in. underclearance. Additional features are simple hydraulic lifting mechanism, sealed ball bearing wheels, heavy duty fifth wheel steer and balanced spring handle hold-up. Capacities are 3000, 5000 and 10,000 lb. Steel, rubber or plastic wheels are optional. Made by **Market Forge Co.,** 54 Garvey St., Everett 49, Mass.

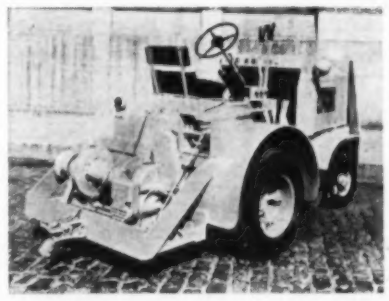
▲ For more details circle **NED-812 E3** on enclosed inquiry slip ▲

ZINC PHOSPHATE COATING promotes paint-to-metal adhesion

Crystalline in nature, CrysCoat HC phosphatizing material creates a zinc phosphate coating on steel and iron that promotes good adhesion of paint to metal. Weight ranges from 200 to 1200 milligrams per square foot. Use can be in tanks and pressure-spray washing machines, both of which meet government specifications. Salt spray resistance of treated and painted parts exceeds specifications. Material holds sludging and scaling to a minimum and does not require a stainless steel tank. Material is easily used, upkeep being determined by a simple titration procedure with supplied equipment. Made by **Oakite Products, Inc.,** 132G Rector St., New York 6, N. Y.

▲ For more details circle **NED-813 E3** on enclosed inquiry slip ▲

POWER WINCH ATTACHMENT for heavy duty industrial tractor



Capacity of the power-driven winch attachment for the heavy duty Super-Huskie six wheel, pneumatic-tired industrial gasoline tractor is 15,000 lb. Winch assembly is located at a low elevation on the rear of the tractor, is driven by a transmission power take-off and is operated by the driver in his seat. The tractor develops a 5000-lb tractive effort and weighs about 6500 lb., neceesitating anchoring the vehicle to realize the ultimate winch cable pull. Made by **Mercury Mfg. Co.,** 4038 S. Halsted St., Chicago 9, Ill.

▲ For more details circle **NED-814 E3** on enclosed inquiry slip ▲

HYDRAULIC DESIGN MADE EASY!

This Hannifin catalog gives complete engineering and design data on 11 Hydraulic cylinder types (1" to 8" bore), with or without cushions—styled to meet every mounting requirement. Interchangeability of collars and caps makes possible unlimited combinations. Send for your copy of this valuable reference.

WRITE FOR BULLETIN 110.

HANNIFIN

Hannifin Corporation • 1127 S. Kilbourn Ave. • Chicago 24, Illinois

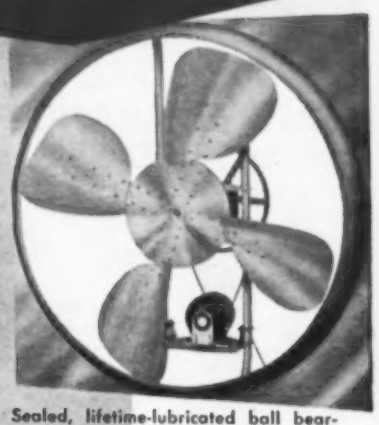
▲ For more details circle **NED-815 E3** on enclosed inquiry slip ▲

At Last...

AN INDUSTRIAL FAN WHICH

REQUIRES NO MAINTENANCE

OFFERS FULL 10-YEAR GUARANTEE



Sealed, lifetime-lubricated ball bearings in both fan and motor never require lubrication. Install 'em and forget 'em.

INDUSTRIAL FANS BY **Murray** COMPANY OF TEXAS INC

Atlanta, Ga.

H. C. BIGLIN CO., INC.
177 HARRIS STREET, N.W. • ATLANTA, GEORGIA

▲ For more details circle **NED-816 E3** on enclosed inquiry slip ▲

Simple operation beats five o'clock deadline

At the Symington-Gould Corporation, Depew, N. Y., extensive revisions are made on drawings . . . and prints are ready for mailing to customers—hours, even days, ahead of the old schedule.

See how it's done—all so easily—with Kodagraph Repro-Negative Paper . . . another versatile photographic material in the famous Kodagraph line.

1. A basic drawing—which must be revised to meet the individual customer's specifications—is exposed on Kodagraph Repro-Negative Paper in a standard print-making machine; then the print is processed in standard photographic solutions. An easy *roomlight operation* that produces a negative photographic intermediate from the original drawing.

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Symington-Gould also saves time and dollars with Kodagraph Autopositive Paper and Cloth, which are processed in the same easy manner as Repro-Negative Paper, but produce positives *directly* from the originals.

Write for free copy of "Modern Drawing and Document Reproduction." It gives details on the revolutionary Kodagraph line, which you, or your blueprinter, can process . . . quickly, economically.

Kodagraph Reproduction Materials

"THE BIG NEW PLUS" in Engineering Drawing Reproduction

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

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Wolverine

Heavy Duty QUICK ACTION TOGGLE CLAMPS

Extra CLEARANCE
Extra SPEED

Rugged construction—drop forgings, cast steel and solid bar stock.

• • •

Wolverine Toggle Clamps also available in several types and sizes of Standard Action and Push Action units.

• • •

Wolverine Clamps are in use in almost every major industrial field and are specified by prominent engineering firms. Write for Bulletin.

WOLVERINE TOOL CO.
1482 E. WOODBRIDGE
DETROIT 7, MICHIGAN

▲ For more details circle NED-820 E3 on enclosed inquiry slip ▲

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Learn how these

RAYMOND

HYDRAULIC TRUCKS & TABLES
can cut costs, save time in your plant. Fill in and mail the coupon below for bulletins now!

Lightweight PALLET LIFT TRUCK
Watch one man handle 2,000 lb. loads with this *Raymond* Pallet Truck! Hydraulic power does heavy lifting. Separate pedals for lifting and lowering—270° turning radius.

Heavy Duty PALLET LIFT TRUCK

SKID LIFT TRUCK

Handle heaviest loads with ease with this rugged *Raymond* Truck! It's fully hydraulic, has exclusive finger-tip lowering, 360° turning radius. 4,000 or 6,000 lb. capacities.

Put this *Raymond* Truck to work handling skid loads! It's hydraulically operated, has exclusive finger-tip lowering, 360° turning radius. 2,500; 4,000 or 6,000 lb. capacities.

SHEET & STRIP FEEDING TABLE
Feed sheets faster at presses, cutting machines, forming equipment with this *Raymond* Table. Keeps material at correct working level. 2,000 to 20,000 lb. capacities.

Portable ELEVATING TABLE
Use this *Raymond* Table for die handling, sheet feeding, work positioning or loading! Features 30" square top, 2,000 lb. capacity. Standard Model elevates from 28" to 44"—Telescopic Model, from 28" to 50".

HIGH LIFT TRUCK
Pick this *Raymond* Truck if you do die handling, loading, work positioning, ceiling maintenance!
It's a lift truck and tiering truck combined. Hand or electrically-driven hydraulic power unit, 60" or 108" elevated height. 1,000 lb. capacity.

GET THE FACTS

The RAYMOND CORPORATION
4112 Madison St., Greene, N.Y.

Please send me Bulletins describing: ☐ 2,000 lb. Pallet Truck; ☐ 4,000 lb. Pallet Truck; ☐ Skid Truck; ☐ Portable Elevating Table; ☐ Sheet & Strip Feeding Table; ☐ High Lift Truck.

NAME_____ TITLE_____
COMPANY_____
STREET_____
CITY_____ STATE_____

▲ For more details circle NED-821 E3 on enclosed inquiry slip ▲

New Literature and Catalogs

Metal Abrasives, Pigments & Powders

Metals Disintegrating Co.—In the 250 loose-leaf pages of the "MD Blue Book" is unfolded the story of this company and its activities. Sections take reader through various phases of metal abrasives, evaluation and application of metal pigments; the making, testing and use of metal powders; reference data and tables; and offers a complete collection of technical bulletins on these materials. Book is offered free only to executives concerned with purchase or specifying of those products, but is available at $5 per copy to those who not so qualify. Colored index tabs facilitate quick reference.

▲ For more details circle NED-822 E3 on enclosed inquiry slip ▲

Welding Alloys & Rods

Titan Metal Mfg. Co.—Chemical and physical properties of bronze welding alloys are outlined and discussed in 6-page folder. Latest ASTM, AWS, Federal and Navy specifications which welding rods meet are shown, as well as recommended uses and applications for specific Titan alloys. The Double Deoxidation process is also covered.

▲ For more details circle NED-823 E3 on enclosed inquiry slip ▲

Solder Products

Anchor Metal Co.—Properties of line of acid and rosin core and solid wire solder products available in all standard alloys for radio, electrical, electronic and similar applications are covered in 4-page bulletin 52-A.

▲ For more details circle NED-824 E3 on enclosed inquiry slip ▲

Connectors & Terminals

Viking Electric—16 pages of engineering specifications and scale templates for line of miniature connectors, terminal boards, thermocouple connectors and printed circuit hardware are contained in loose-leaf type manual J. Items are carried in stock and are adaptable to wide range of electrical and electronic equipment.

▲ For more details circle NED-825 E3 on enclosed inquiry slip ▲

Copper & Brass Products

Chase Brass & Copper Co.—Seventy catalogs and technical handbooks on copper and brass products are listed in file size bulletin. Subject matter of bulletins includes copper engineering alloys; bus conductors; wire, cable and magnet wire; water tube and fittings; brass and copper building products; radiant heating tube and fittings; condenser and heat exchanger tubes; wire cloth; rivets, burrs and washers; and pipe and tube products.

▲ For more details circle NED-826 E3 on enclosed inquiry slip ▲

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Look for UNIVERSAL DRAFTING MACHINE'S famous feature—the 360° Full-Vision Protractor

Harried engineering staffs in thousands of plants are using Universal Drafting Machines and Duraline Scales to speed ideas through the drawing stage and into faster production.

For fifty years, Universal, the pioneer drafting machine, has remained the leader in accuracy—in ease of operation—in years of dependable service rendered. It combines into one fine, time-saving instrument most of the loose tools of the draftsman's art. It is adaptable in the field to any board.

And every Universal "Boardmaster" becomes a better instrument when equipped with the new Duraline Scales. These scales, made of aluminum, ground from the solid, are the last word in accuracy because they are engine divided at 70° F. They are easy on the eyes—no glare—large numerals, and they will not smudge paper—will not file the pencil point.

Ask your drawing material dealer about these two time and money saving tools, or write direct for descriptive bulletins.

UNIVERSAL DRAFTING MACHINE CORPORATION
7960 Lorain Avenue • Cleveland 2, Ohio

UNIVERSAL
DRAFTING MACHINE — DURALINE SCALES

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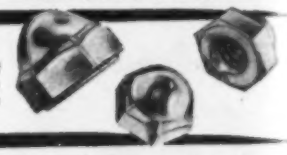
GRC ZINC ALLOY FASTENINGS

GRC WING NUTS
Exclusive, finger-grip design; easy to assemble, disassemble; brightly finished; clean threads.



GRC CAP NUTS
Die cast, not turned! Free of tool marks and cut-off burrs; class 2 threads tapped square with face of nut.

GRC Small TUBULAR RIVETS
Die cast, not headed! Closer tolerances, more uniform heads for greater riveting efficiency. Dia. up to 9/64"; lengths to 5/16".

NEW!

GRC WING SCREWS
A steel screw combined with GRC's attractive finger-grip wing-nut

• DURABLE
• DEPENDABLE
• RUSTPROOF

Gries die cast zinc alloy fastenings are durable, rustproof . . . economical, too! All Gries fastenings may be used without protective finishes in most applications. Furnished in all commercial finishes when desired. Prompt delivery on standard sizes—specials to order.
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ABRASIVE DISCS and FLEXIBLE DISC HOLDERS

USED FOR ALL CONTOUR GRINDING ON FERROUS AND NON-FERROUS METALS WITHOUT LOADING

PACKED IN EASY-TO-USE "PEEL-OFF" PACKAGES OF 50 and 100 DISCS

Discs are available in ½" to 20" dia. Grits 24 to 320. Flexible Rubber Disc Holders in ½" to 10" dia.

WRITE TODAY FOR FULL INFORMATION

THE Metal Removal Co.
1546 N. ORLEANS STREET • CHICAGO, ILLINOIS

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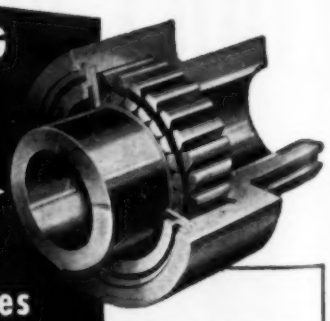
FORMSPRAG CLUTCHES Are *Full Complement* Clutches



OVER-RUNNING
INDEXING (Feeding)
BACKSTOPPING

A FULL COMPLEMENT OF SPRAGS—between two races—provides an infinite number of gripping positions. This, along with Formsprag's internal simplicity, means: INSTANTANEOUS, ACCURATE OPERATION with no *backlash* . . . LONG LIFE because of changing contact points . . . MAXIMUM TORQUE CAPACITY for size and weight.

Before you specify another clutch, be sure to read this 10-page folder of technical engineering data. Just write to Formsprag — on your letterhead, please.

FORMSPRAG Company
23595 HOOVER ROAD
VAN DYKE, MICHIGAN

▲ For more details circle NED-830 E3 on enclosed inquiry slip ▲

FREE FOLDER

tells when to consider

SMALL ZINC DIE-CASTINGS

1000 per lb. to 3 per lb.

Explains how Dollin's high-speed automatic equipment cuts piece costs . . . eliminates machining and assembly operations. Provides check list of cost factors that can be eliminated . . . tells action to take to find out actual savings. Send for *Small Parts Folder plus Samples.* **DOLLIN CORPORATION, 612 So. 21st St., Irvington 11, N. J.**

Zinc & Aluminum Die-Castings in All Commercial Sizes

▲ For more details circle **NED-831 E3** on enclosed inquiry slip ▲

ALLSPEED MOTOR DRIVE is available in both upright (shown here) or horizontal models. Standard NEMA frame motors are used on all sizes. Available in speed variations from 2:1 up to 16:1 and adaptable to any machine—new or old. Units are also available without motors.

Worthington Allspeed Motor Drive

can increase your production by . . .

- Assuring peak production speeds
- Providing instantaneous, smooth, stepless speed control—the correct operating speed for each job
- Enabling you to change from minimum through maximum speed while motor is in motion
- Guaranteeing automatic and positive belt tensioning—no time wasted adjusting belts

Learn more about the cost-cutting features of Allspeed Motor Drives. Write for Bulletin AS-1600-B6. Worthington Corporation, Oil City, Pennsylvania.

AS.3.4

WORTHINGTON
Allspeed Drives

▲ For more details circle **NED-832 E3** on enclosed inquiry slip ▲

New Processes and Materials

PROTECTIVE WRAPPING is dustproof and water-repellent

A specially coated wrap that sticks only to itself, Spot-Seal forms a dust-proof, water-repellent package convenient for small or loose part and subassemblies which are to be shipped as single packages. It can also be used to keep dust and dirt out of delicate parts, to protect finishes of precision metal parts from scratches, fingerprints and foreign matter or for identification in storage. Wrap requires no strings or other fastenings and is available in printed or plain rolls, 600 ft long, and in widths from 12 to 48 in. Made by **Sherman Paper Products Corp.,** 1480 Oak St., Newton Upper Falls 64, Mass.

▲ For more details circle **NED-833 E3** on enclosed inquiry slip ▲

DESICCANT CALCULATOR gives units required per package

How many desiccant units are required to protect packaged items in accordance with MIL-P-116A, can be determined by this slide type calculator. Made of 0.010-in. Vinylite, it shows number of units required for all interior and exterior metal containers meeting specifications MIL-C-6054A and MIL-C-6055 and for all flexible barrier containers meeting specifications MIL-B-131B, MIL-C-6060, MIL-C-6065 and MIL-B-7841 (AER). Price is $2. Offered by **Greenwood Packaging Supply Co.,** Dept. NED, 859-879 Summer Ave., Newark 4, N. J.

▲ For more details circle **NED-834 E3** on enclosed inquiry slip ▲

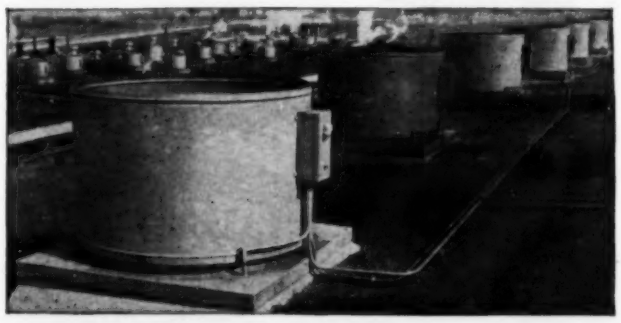
Truck-Mounted Handling System

Brooks Equipment & Mfg. Co.—46-page spiral bound catalog 352 describes and illustrates Brooks Load Lugger materials handling system. It consists of detachable bodies that are easily filled at convenient loading point, hoisted on the truck body, then hauled and dumped in much the same manner as a dump truck. Various body types, specifications and design features of all models are included.

▲ For more details circle **NED-835 E3** on enclosed inquiry slip ▲

for a 5,400,000 cfm ventilating job . . .

FORD CHOOSES SKY-BLAST



100 SKY-BLASTS move massive volume of air at huge Chicago Aircraft Engine Plant

Propellair SKY-BLASTS ventilate Ford's forge plant and furnish fume-free, efficient working conditions. They replace less efficient ventilators which turned air down on the roof. The SKY-BLAST shoots high in the air to be taken by winds, keeping fumes and dirt off the roof. Features include famous cast aluminum airfoil propellers, automatic non-leak butterfly dampers, direct-connected "All-Weather" motors. Low silhouette, easily mounted. Write for Bulletin N-680.

PROPELLAIR®

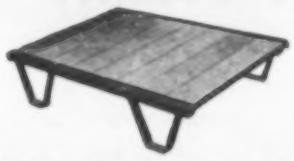
SKY-BLAST® Power Roof Ventilator

PROPELLAIR DIV., ROBBINS & MEYERS, INC. • SPRINGFIELD, OHIO

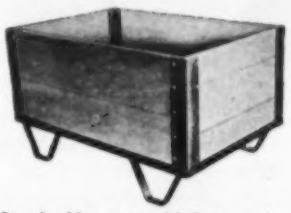
▲ For more details circle **NED-836 E3** on enclosed inquiry slip ▲

In production or in storage

IRONBOUND EQUIPMENT HANDLES SMALL PARTS MORE EFFICIENTLY



Standard 2-way entry bolted type skid built to handle loads up to 5 tons.



Standard box top welded to standard skid. Available too, with removable boxes. Handles many items in production and storage.

Flexible arrangement of boxes and skids permits tiering and stacking to meet your individual requirements. Provides quick availability, easy handling, or storage for complete units or parts.

Each of the units illustrated has an important use in modern industry. Ironbound skid platforms and box tops are prime sources of increased plant capacity so vitally needed today. Our representative can help you to increase your output and plant space. Catalog GP-7 may help you, too!

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

▲ For more details circle **NED-837 E3** on enclosed inquiry slip ▲

Cummins BALL•RITE 44

BALL•RITE construction is a combination of the finest specs in an industrial tool.

1. Ball bearings in the right places.
2. Always hardened gears.
3. Always Cummins double coil motor (the type always used in industrial drills.)
4. Always dynamically balanced armature for smooth, flowing power.

Equals †40 Industrial Quality Drills

Here is a $40 drill in everything but price. Has exclusive Cummins BALL•RITE specs . . . PERM-ALIGN gearing that can't accidentally be knocked out of line . . . super-powered motor that can't be stalled in metal up to ¼-in.; up to ½-in. in wood. *Buy BALL•RITE and buy right!* At your Industrial Supply or Hardware Dealer.

GET THE FACTS— Find out what BALL•RITE means to you. Send for Spec Sheet . . . N-53

SINCE 1887

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DIVISIONS:
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IN CANADA: 334 Lauder Ave., Toronto

▲ For more details circle **NED-838 E3** on enclosed inquiry slip ▲

Here's how to SAVE TIME in SETTING-UP and KEEPING your MACHINES LEVEL

Fast Accurate Self-Aligning Machine Leveler

Empco JACK

Empco Jacks enable you to meet hurry-up demands for relocation of machinery by giving you the fastest, easiest, most accurate machine leveling ever known: you simply raise or tilt machine sufficiently to allow the Empco Jacks to be slipped under base. The number of jacks required depends on weight of machine and size of base. Once set on Empco Jacks, the entire operation of leveling and maintaining equipment level is quickly done. By applying a wrench to the "hex" head of adjusting screw, an adjustment is obtained either up or down until your level indicator reads "zero." Write for specifications and prices today.

Vibration absorbing mounting pads increase machinery life.

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

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PROFITABLE
PRODUCTIVE
ECONOMICAL

THE SUREWELD® PORTABLE D-C WELDER

The Sureweld Gas Driven D-C Welder is small enough, portable enough to go wherever the operator can go. And that's why it's so profitable, productive, economical. Delays, expenses, interruptions normally a part of on-the-job welding are eliminated. More time is spent welding. More welding is done. And the savings are usually enough to repay its cost in a few short weeks. Its capacity is ample for 85-90% of on-the-job welding. We'll be glad to demonstrate in your shop what owners say is the most useful welder they ever had. Or to send a copy of bulletin NH-121. Write today.

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NCG® National Cylinder Gas Company
840 N. Michigan Ave., Chicago 11, Illinois

For more details circle NED-840 E3 on enclosed inquiry slip

How much Vacuum do you need?

OFFICE 1½ HP

FACTORY 7½ HP

UP TO 100 HP

It is wise to get a vacuum machine large enough the first time, because you will find so many new uses for vacuum in your plant. Spencer Industrial units start at 1½ HP—run up to 100 HP. For the factory offices, Spencer offers sturdy machines as small as ½ HP. Special vacuum tools for any purpose.

The Spencer representative has application data on more than 130 unusual uses — bulletin on request.

PERMANENT INSTALLATION

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD
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For more details circle NED-841 E3 on enclosed inquiry slip

If the equipment you design calls for 29.9" of vacuum or 25 psi pressure

READ what your prospects say about LEIMAN Pumps

"Never wear out."

"In almost continuous operation, 24 hours a day for 21 years. Absolutely reliable."

"Requires practically no maintenance care."

Wings in this Leiman Pump take up their own wear, year after year, and always maintain contact with cylinder wall. *See our Listing in Sweet's Product Design File*

Write for 16-page catalog and blueprints of typical applications on Leiman rotary positive pumps—choice of industry since 1889.

LEIMAN BROS., INC.
167 Christie Street, Newark 5, N. J.

For more details circle NED-842 E3 on enclosed inquiry slip

New Literature & Catalogs

Electronic Heaters & Heating Devices

General Electric Co. — Information and buying guide GEC-1005D describes Calrod electric heaters and heating devices in terms of application, special features, installation and price. It is indexed by process and application and contains methods of determining power requirements and heat losses. Included are immersion, strip, cartridge, tubular, insertion and fin heaters and melting pots, thermostats, switches, oven heaters and induction heaters.

For more details circle NED-843 E3 on enclosed inquiry slip

Electric Dehumidifiers

Remington Corp., Air Conditioning Div.—Determination of minimum dehumidifying equipment and capacity needed to eliminate moisture problems can be made from information in 6-page illustrated bulletin 531 on the Moisture Magnet dehumidifier. Much information is in form of simple tables and step-by-step instructions.

For more details circle NED-844 E3 on enclosed inquiry slip

Maintenance Paints

Skybryte Co.—Twelve maintenance paints for inside and outside use are described in this 6-page illustrated folder. Included are factory glass cleaner, chain link fence paint, heat resisting interior and exterior aluminum paint, acid and alkali resisting aluminum and black paint and others.

For more details circle NED-845 E3 on enclosed inquiry slip

Making Ceramic Models

American Lava Corp.—"How To Make Your Models from Lava" is title of 4-page illustrated bulletin 525. It outlines procedures step by step, discusses the materials, gives properties of available Lava blocks before and after firing and outlines firing procedures. It is machined as easily as soft brass and is chemically inert, permanently rigid, nonmagnetic and wear resistant.

For more details circle NED-846 E3 on enclosed inquiry slip

Centrifugal Pressure Blower

Eclipse Fuel Engineering Co.—Constant air supply for all types of combustion equipment can be furnished by the centrifugal pressure blowers described and illustrated in 8-page catalog K-100. Design features, drive arrangements, adjustable outlet positions, dimensions and specifications are covered.

For more details circle NED-847 E3 on enclosed inquiry slip

Horizontal Band Saws

Wells Mfg. Corp.—Line of horizontal metal cutting band saws is described and illustrated in 12-page catalog G-52. Special heavy duty saws and those produced for unusual cutoff jobs are also covered. A reference chart aids in selection of proper blade, feed and speed for cutting various types and sizes of materials.

For more details circle NED-848 E3 on enclosed inquiry slip

CUT BLUEPRINTING COSTS 50% TO 80%

SAVE TIME—SAVE MONEY

VERSA-LINER SPEED MASTER MODEL "S" AMMONIA-TYPE WHITEPRINTER

NEW, FASTER—MORE EFFICIENT!

● *Prints up to 14 ft. per min. Develops at 8 ft. per min.* Produces black line and colored line whiteprints in volume at low cost! Handles cut sheets or roll stock up to 42" wide in any length. *Equipped with 2000 watt* high pressure Vicor jacketed lamp for greater printing speed. *Newly devised blower system* for coolest contact—protects originals. Feed, delivery and all controls in front, within easy reach. Easy to install and operate. Trouble-free. Simple to clean. Minimum maintenance. 220 v. single-phase 60 cycle AC. Priced at $1565.00. *Get full facts now.*

Also other Versa-Liner and Spee-Dee Whiteprinting Outfits for Moist Diazo or Ammonia Dry Process from $55.00

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CHICAGO 45, ILLINOIS
Founded in 1937—Over 10,000 Machines in Use
MFRS. OF WHITEPRINT, BLUEPRINT AND PHOTOCOPY EQUIPMENT

For more details circle NED-849 E3 on enclosed inquiry slip

Keeps Clothes Fresher! penco

"AIR-LITE" LOCKER

The steel locker that "breathes" through ¾" mesh door openings—an exclusive Penco feature!

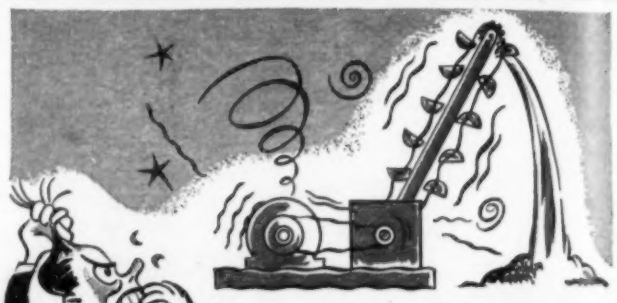
- MAXIMUM NATURAL VENTILATION
- DAMP CLOTHES DRY FASTER
- CONTENTS CAN BE INSPECTED—WITHOUT OPENING DOOR
- SAFE, PILFER-PROOF STORAGE
- PENCO QUALITY CONSTRUCTION
- SINGLE AND DOUBLE TIER TYPES—IN A WIDE RANGE OF SIZES

Send for complete locker catalog

85TH YEAR OF SERVICE

PENN METAL Corporation of Penna.
82 OREGON AVE., PHILA. 48, PA.

For more details circle NED-850 E3 on enclosed inquiry slip



Take the "JERKS" out

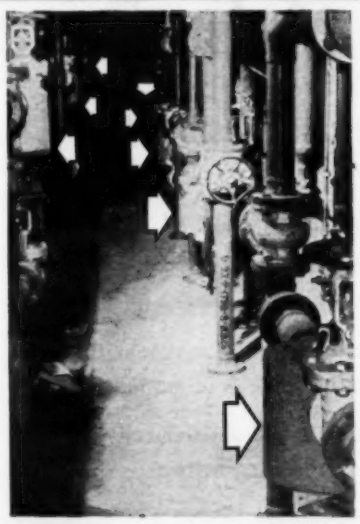
Are you tearing your hair over—
Smoking, "killing" motors? Breaking drives? Overloaded circuits?
Lugging, stalling engines? Damaged equipment? Excessive maintenance?
Then it's time to take the "jerks" out with Twin Disc's power-smoothing HYDRO-SHEAVE® Drive. Call your Twin Disc Hydraulic Dealer *today*—ask for Bulletin 145-B.

HYDRO-SHEAVE Drive—The Hydraulic Coupling unit for motors or engines, ¾ to 50 hp.

TWIN DISC CLUTCHES AND HYDRAULIC DRIVES

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois
BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

For more details circle NED-851 E3 on enclosed inquiry slip



Arrows point to Frantz FerroFilters in lubricating system of 4-high, 5-stand cold mill in one of country's largest steel mills.

Beat Tool and Machine Wear... Maintenance ... Downtime with the FRANTZ FERRO FILTER Magnetic Separator

FRANTZ permanent magnet FERRO-FILTERS insure positive removal of ferrous particles which bridge the lubricating oil film and damage gears, bearings and other surfaces subject to wear. FERROFILTERS are also used on coolant lines increasing tool life and producing better finishes.

Send for BULLETIN 56

S. G. Frantz Co., Inc.
P. O. Box 1138 Trenton 6, N. J.

For more details circle NED-852 E3 on enclosed inquiry slip

Lasts Longer...

HOUGHTON
COSMOLUBE
multi-purpose grease

Allows more time between greasings!

• This heavy-duty grease is widely used throughout industry because it works well in *hot, cold* or *wet* locations. It adheres to metal and resists oxidation. Won't separate. Try Cosmolube for your tough grease jobs. For latest bulletin, write:

E. F. HOUGHTON & CO. PHILADELPHIA 33, PA.

For more details circle NED-853 E3 on enclosed inquiry slip

FINGERTIP CONTROL—Revolvator Go-Getter—telescopic straddle type lift truck—a bear for work in crowded areas, narrow aisles. Fully automatic—extraordinarily maneuverable 200° turning arc—2500 lb. capacity—very slight operator training necessary. Write for full details of this and many other models.

REVOLVATOR CO. 8732 TONNELE AVENUE NORTH BERGEN, N. J.

For more details circle NED-854 E3 on enclosed inquiry slip

CUTS
CORROSION
LOSSES

★ TYGON plastic Paint protects metal, concrete and wood from attack by acids, alkalies, oils, fresh or salt water. Tough, flexible film resists impact. Non-contaminating to solutions.

U. S. STONEWARE
Since 1865 • Akron 9, Ohio

90C

For more details circle NED-855 E3 on enclosed inquiry slip

New Processes & Materials

ANTITRUST PAINTS
applied without wire brushing

Usable on all metals, both indoors and out, Rustrem antirust paints can be applied right over rusted surface without wire brushing, scraping or sandblasting. Paint penetrates rust layers and adheres tightly to surfaces beneath, forming a tight seal which resists moisture, temperature changes, chemicals, acids and fumes. It can be applied effectively over damp surfaces. Because it contains all-weather solvents which do not thicken in cold weather, paint can be applied in winter. Red, gray and green, in addition to standard black, aluminum and clear are available colors. Made by **Speco, Inc.**, Dept. RSA, 7308 Associate Ave., Cleveland 9, O.

For more details circle NED-856 E3 on enclosed inquiry slip

CONCRETE FLOOR HARDENER
prevents dusting and deterioration

Applied with brush or mop directly on new or old concrete floors, Transvar 266 controls dusting of floors. It actually binds together the tiny particles that are part of the concrete surface. Material is thin liquid, light amber in color, but it does not alter the appearance of floor because of its deep penetration. Finish can also be used on wood floors to stop surface from splintering. Made by **United Laboratories, Inc.**, 16804 Euclid Ave., Cleveland 12, O.

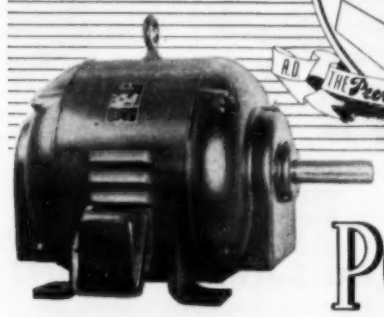
For more details circle NED-857 E3 on enclosed inquiry slip

ARC WELDING ROD
for use on all metals

Only slight contamination pick-up, continued nonwavering arc and long life are features of Zirtung tungsten zirconium alloy arc welding rod. Electrode is practical for use on all metals, particularly mild steel, aluminum and magnesium where contamination on touch starting is greatest. Tests showed only 1 in. of rod was consumed in 12,000-in. semiautomatic welding job on two sheets of 0.035-in. stainless steel. Electrode operates on the same current range as thoriated tungsten and contains no radio-active materials. Made by **Sylvania Electric Products Inc.**, Dept. JPW, 1740 Broadway, New York 19, N. Y.

For more details circle NED-858 E3 on enclosed inquiry slip

Peerless
KNOWLEDGE SKILL
PREMIUM-BUILT ELECTRIC MOTORS
AD THE Peerless ELECTRIC COMPANY 1893



The POWER
that builds reputations.

Quality equipment producers protect themselves and you with Peerless premium-built electric motors.

Peerless Motors are expertly designed for these jobs . . . built by men skilled in their work . . . men who know the value of efficient, friendly service. The Peerless name . . . a name that for 60 years has stood as a symbol of quality and performance.

THE PEERLESS ELECTRIC COMPANY

MOTORS
FANS
BLOWERS

Peerless Electric

1415 W. MARKET ST. WARREN, OHIO

For more details circle NED-859 E3 on enclosed inquiry slip

The ARBOR PRESS
You've Been Looking For!

It's the new Manzel 10 Ton Hydraulic Arbor Press...engineered to meet a variety of needs in manufacturing plants and automotive service stations. The long ram stroke and unusual depth and width of throat make it adaptable to straightening, material testing, bending, bearing or bushing work, and many other uses. Gauge is optional.

The press is portable...or can be permanently mounted on bench, column, or wall. Power unit operates 3 times faster. Ram is self-retracting. Write today for complete information.

Jobber inquiries welcome

Manzel
315 Babcock Street
Buffalo 10, N. Y.

For more details circle NED-860 E3 on enclosed inquiry slip

SPECIAL BUILT
RACKS TRUCKS DOLLIES BASKETS
COST LESS THAN YOU THINK!

You can get plenty of facts on how to solve tough materials handling problems for just a 3¢ stamp. We've helped hundreds of companies and we're tickled pink to see them enjoy the benefits of our know-how. We'd like to help you too.

You see, we've got the secret on how to build low-cost racks, trucks, dollies, baskets, etc. for special uses—in individual units or combinations—one or a thousand. You have no idea how much you can save in first cost and in greater handling efficiency. So find out now—what can you lose?

Top—Rack truck with removable trays and adjustable tray spacing.

Bottom—Rack with sliding trays and designed for fork lift.

When writing ask for bulletin N-3 showing a variety of our special built equipment.

Write today, just say—"OK Chuck Hoffman. You tell us" (Chuck's the boss)

HOFFMAN COMPANY
41-43 N. PENN ST., YORK, PA.

For more details circle NED-861 E3 on enclosed inquiry slip

HIGH PRESSURE REDUCING VALVE for AIR or GAS SERVICE

FISHER TYPE 1301F

INLET PRESSURE UP TO 3000 PSI
OUTLET PRESSURE 10 TO 150 PSI

TYPE 1301F is commonly used in conjunction with pilot operated controllers where high pressure operating medium is used. They are also used in general industrial applications for high pressure reduction of non-corrosive air or gas.

CONSTRUCTION: All forged bronze construction with glass impregnated Teflon valve disc, stainless steel orifice. Furnished with one inlet connection and two outlet connections of ¼" pipe size.

PRESSURE RANGE: Suitable for inlet pressures up to 3000 PSI; reduced pressure spring ranges of 10 to 75 PSI; 50 to 150 PSI. Adjustment screw for easy adjustment of reduced pressure setting.

FISHER GOVERNOR COMPANY
Marshalltown, Iowa

▲ For more details circle NED-862 E3 on enclosed inquiry slip ▲

Asbestos Gloves for HOT Jobs

Handle hot things with Safety. Wear Industrial's famous No. 200-14 asbestos gloves. • Made of close woven 2½ lb. per square yard Underwriters Grade asbestos cloth that resists burning. Big, roomy cut; airy and comfortable. All seams double stitched. One-piece construction from tip to top with no seams at wrist or wearing edges to burn or pull out. Made lined or unlined. Many styles of gloves and mittens, both plain and leather reinforced. Over 40 years experience in designing and manufacturing a complete line of dependable Safety Apparel. Write for free catalog.

To be sure of the Genuine — Steel-Grip INDUSTRIAL Safety Apparel — Demand this Trade Mark

INDUSTRIAL GLOVES COMPANY
A Corporation
1522 Garfield Street, Danville, Illinois
(In Canada: Safety Supply Company, Toronto)

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"FULFLO" OIL BY-PASS RELIEF VALVES

NEED NO MAINTENANCE

For ram presses, machine tool hydraulic mechanisms, Diesel and oil-burning equipment.

NON-CHATTERING
NO POUNDING NOISE
BRASS OR CAST IRON
For pressures from 0 to 500 lbs. Sizes ¼" to 2".

Write on your letterhead for professional edition of FULFLO MECHANICAL DATA BOOK

Standard or Flange types.

FULFLO THE FULFLO SPECIALTIES CO. Inc.
BLANCHESTER, OHIO

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New Literature & Catalogs

Illuminated Magnifier

E. W. Pike & Co.—Portable and lightweight, the standard Flash-O-Lens inspection magnifier is available in four battery and four electric models, with magnifications from 5X to 40X. Bulletin describing magnifier includes specifications and typical application data, with a page on special models and attachments.

▲ For more details circle NED-865 E3 on enclosed inquiry slip ▲

Tool Bits

Whitman & Barnes—Catalog "Hercules Carbide and High Speed Tool Bits" contains 8 pages of ordering information on a line of standard turning and threading tools. Carbide bits are manufactured in two grades, one for steel and the other for cast iron and nonferrous materials, separately identified by red and gray banded shanks.

▲ For more details circle NED-866 E3 on enclosed inquiry slip ▲

Copying Process

General Aniline & Film Corp., Ozalid Div.—Any number of accurate copies can be quickly made from any translucent original by the Ozalid process detailed in this 48-page catalog. The process and advantages it offers through time and labor savings to both industry and office are fully treated.

▲ For more details circle NED-867 E3 on enclosed inquiry slip ▲

Electric Heaters

L. J. Wing Mfg. Co.—Bulletin E-1 features three types of electric unit heaters and heater sections for general, industrial, commercial and specialized use. Capacity tables for the various models as well as dimensional data with mounting heights and coverage are given.

▲ For more details circle NED-868 E3 on enclosed inquiry slip ▲

Rust & Tarnish Removal

Octagon Process Inc.—Detailed instructions for six types of job-engineered Rusticlean rust and tarnish removing compounds are given in this booklet. It tells how it is possible to remove rust and tarnish, retard corrosion and promote paint adhesion in a single operation. Even heavy, immovable vertical and horizontal surfaces can be readily treated with one of the compounds.

▲ For more details circle NED-869 E3 on enclosed inquiry slip ▲

Shear, Punch & Coper

Kling Bros. Engineering Works — Among the dozen or more operations possible with the Kling shear, punch and coper are shearing plates, angles or bars; punching in or coping angles; cutting and mitering. 10-page catalog illustrates and describes the features of the various models and attachments, also gives detailed engineering data on capacities and specifications.

▲ For more details circle NED-870 E3 on enclosed inquiry slip ▲

FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES
CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.

WATERLOO METAL BOXES AND CHESTS

Waterloo VALVE SPRING COMPRESSOR CO. WATERLOO, IOWA

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Instant HEAT that's "QUICK-ON-THE-TRIGGER" and "RIGHT-ON-THE-TARGET"

USE THE WALL TRIG • R • HEAT SOLDERING IRON
READY TO SOLDER IN SECONDS

$11.95

HEAT-CONTROL Thermostatic Action guaranteed for the life of the iron, or double your money back!

Heat is QUICK! Just touch the trigger, and in seconds TRIG-R-HEAT is ready to solder.

Heat is RIGHT! Exclusive thermostatic action (without fragile thermostats), quickly brings TRIG-R-HEAT to "on-the-target" soldering temperature and keeps it there. Built-in spotlight. Send for free catalog!

OVER 20,000,000 SOLDERING PRODUCTS SINCE 1864

WALL MANUFACTURING CO.
GROVE CITY • PENNSYLVANIA

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A Tip to the very wise Buy VARIDRIVES

VARIABLE SPEEDS
Just turn a dial to get any rpm. Motor, speed changer and gear train all housed in one unit. ¼ to 50 h.p.

REQUEST VARIDRIVE BULLETIN

U.S. VARIDRIVE
THE MIRACLE MOTOR

U.S. ELECTRICAL MOTORS Inc.
Los Angeles 54, California · Box 2058 · Milford, Connecticut

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First in stainless steel fastenings

INDUSTRIAL EQUIPMENT manufacturers count on Anti-Corrosive for fast, dependable service on all types of stainless steel fastenings. They know that our IN STOCK inventory of more than 8,000 items and sizes is the largest, most complete, in the industry. In addition, our production capacity is geared to produce large or small quantities of stainless fastenings, of every size and description, faster and more economically!

Write for Catalog 53T today.

ANTI-CORROSIVE METAL PRODUCTS CO., INC.
Castleton-on-Hudson New York

▲ For more details circle NED-874 E3 on enclosed inquiry slip ▲

Can you afford to be without corrosion-resistant thermometers?

Production errors caused by thermometer failures can be mighty costly.

The corrosion-resistant, pressure-tight construction of Rochester dial thermometers saves you this sort of expensive trouble. And it practically doubles the life of the thermometer under severe operating conditions.

An exclusive stainless steel welding process bonds case, stem and nut into a single corrosion-resistant unit.

RECALIBRATE ON THE JOB

• Rochester dial thermometers are built to stay accurate under rough treatment. But if an unusually hard blow knocks the pointer out of adjustment, you can recalibrate it quickly and easily by turning a single screw.

You can order money-saving Rochester thermometers from one of our specialized instrument representatives, listed in Sweet's Catalog or the yellow pages of your telephone directory. Or write us direct for further details. ROCHESTER Manufacturing Company, Inc., 114 Rockwood Street, Rochester 10, New York.

MILLIONS of Rochester Dial Thermometers are now delivering dependable service

Rochester
MANUFACTURING COMPANY, INC.
DIAL THERMOMETERS · GAUGES · AMMETERS

▲ For more details circle NED-875 E3 on enclosed inquiry slip ▲

NEWARK Metallic FILTER CLOTHS

Here are five different weaves of Newark Metallic Filter Cloths. All different in the arrangement of the strands; hence different also in their functioning.

Study the shape of the solids in your solution being filtered. That's just as important as the size, if you want clarity of filtrate. Then write us fully about the solids and we'll be glad to recommend the weave of the cloth that will "stop" them.

Many malleable metals are still available so, if necessary, we can probably supply you with a material that will also withstand highly corrosive conditions. When writing, also give solution characteristics.

All Newark Filter Cloths are woven in our own plant, on our own looms, by our own skilled weavers.

NEWARK for ACCURACY

Our entire line of Filter Cloths, Wire Mesh and Space Cloth, Sieves, "End-Shāk" Testing Units and other Newark Products are described fully in our new Catalog D. Send for a copy.

Newark Wire Cloth COMPANY
351 VERONA AVENUE • NEWARK 4, NEW JERSEY

Philadelphia 3, Penna. 1011 Widener Bldg. · San Francisco, Calif. 3100 19th St. · Chicago, Ill. 36 N. Wacker Dr. · New Orleans, La. 520 Maritime Bldg. · Los Angeles, Calif. 1400 So. Alameda St. · Houston, Texas P. O. Box 1870

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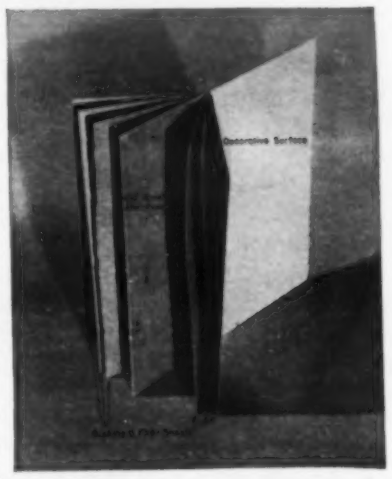
New Processes & Materials

FIREPROOF PLASTIC for decorative applications



Decorative Micarta plastic is made fire repellent by sandwiching a 1/16-in. aluminum sheet between two layers of melamine plastic. Bond between aluminum and plastic is so strong that it can be subjected to widely fluctuating extremes of temperature and humidities up to 100 per cent without breaking. Material is offered in wide variety of colors and wood-grain or textile finishes. Made by **Westinghouse Electric Corp.**, P. O. Box 2099, Pittsburgh 30, Pa.

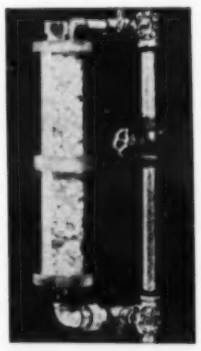
▲ For more details circle NED-877 E3 on enclosed inquiry slip ▲

CASTING SEALANT for ferrous and nonferrous metals

Elimination of microporosity and resistance to corrosive attack of noninflammable hydraulic fluids are qualities imparted to ferrous and nonferrous castings by this casting sealant. It also provides a good base for various coatings. Polyplastex impregnating process will be licensed to manufacturers or special service industries such as heat treaters, platers and anodizers. Developed by **Polyplastex International Corp.**, 1389 Commerce Ave., New York 61, N. Y.

▲ For more details circle NED-878 E3 on enclosed inquiry slip ▲

RUST CONTROL SYSTEM for new or old piping and tanks



Rust in tanks and pipes and electrolysis or galvanic action in water systems where more than one metal is used are readily controlled by Aqua-Clear crystals and feeder. Crystals slowly dissolve as water passes over them, forming a thin protective film on the inner surfaces of tanks and pipes. As water is prevented from coming in contact with the metal, any further rusting action is prevented immediately. Installation of the equipment is simple and rapid. Made by **Sudbury Laboratory**, 100 Dutton Rd., South Sudbury, Mass.

▲ For more details circle NED-879 E3 on enclosed inquiry slip ▲

Boost Output with MEAD WORK FEEDERS

Feed Work Fast to Drill or Tap!

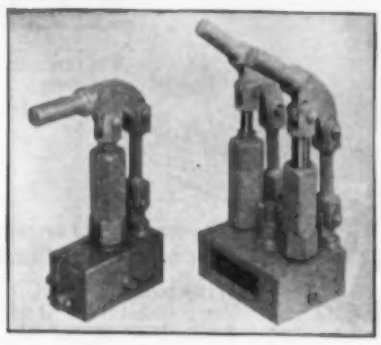
As-fast-as-you-can-step-on-a-button the sensational new Mead pneumatic WORKFEEDER delivers, holds, ejects small parts to be drilled, reamed or tapped. Accommodates stampings, castings, screw machine parts, etc. Adjustable to sizes up to 3". Foot automatic control; operator's left hand is free to keep hopper loaded. Write for new Mead AIR POWER Catalog describing "Mead Family" of air operated fixtures and devices.

MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE., DEPT. NA-53 CHICAGO 41, ILL.

▲ For more details circle NED-880 E3 on enclosed inquiry slip ▲

HAND HYDRAULIC PUMP

Single and Double Designs To 20,000 Pounds

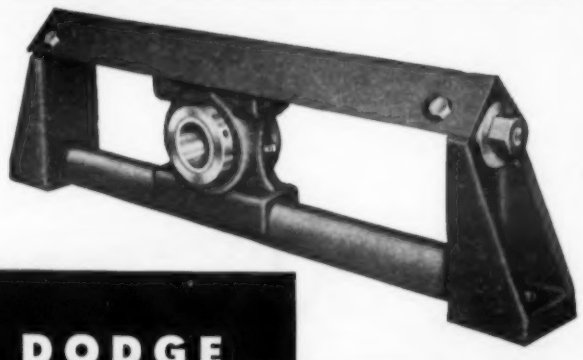


Interchangeable Pistons ⅜-½-¾ inch
★
Integral Release Valve
★
Unit Reservoir 360 cu. in.

Pressure range is 3,000 to 20,000 pounds. Pipe connections measure ¼ inch. Handle length is 18 inches. Weight is 8 to 18 pounds. Can be bolted or welded into position. We specialize in hand pump units to operate in temperatures from minus 65 F to plus 160 F and with any capacity reservoirs required.

WILLIAM S. PINE
1635 E. 22nd St., Los Angeles 11, Calif.

▲ For more details circle NED-881 E3 on enclosed inquiry slip ▲



DODGE TAKE-UPS

— THEY'RE MODERN
— 7 TYPES
— ASK ABOUT THEM!

MODERN, rugged, *dependable!* A great range of types and sizes—for everything from light loads to heavy loads. Babbitted, Bronzoil, SC Ball Bearing, Dodge-Timken Type E Roller Bearing, Angle Frame, Protected Screw. Shaft sizes from 1/2" to 4". Travel from 4" to 48". Stocked by Dodge Distributors. Write us for details.

DODGE MANUFACTURING CORPORATION, 2100 Union St., Mishawaka, Indiana

DODGE
of Mishawaka, Ind.
FIRST IN POWER TRANSMISSION MACHINERY

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NEW and TIMELY!

Get This Information on How to Select Stainless Steels to . . .

✓ Conserve Critical Alloys
✓ Reduce Unit Costs
✓ Improve Performance

This new, 18-page bulletin, "Factors in Selecting Stainless Steels" gives facts and figures on . . .

- Possibilities of straight chrome grades as alternates for chrome nickel grades
- General types of stainless steels
- Physical and mechanical properties
- Relative workability tables
- Relative corrosion and heat resistance

CLIP AND MAIL COUPON NOW!

THE CARPENTER STEEL COMPANY
118 W. Bern St. • Reading, Pa.

At no obligation, send me a copy of your new "Factors in Selecting Stainless Steels".

NAME _____ TITLE _____
(Please Print)
COMPANY _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

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FOR PUMPING MODERATE CAPACITIES AGAINST MEDIUM AND HIGH HEADS USE THESE TURBINE VANE TYPE PUMPS

ILLUSTRATED—Flexible-coupled standard pump

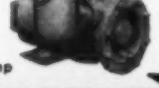
PEERLESS TYPES TVE & TVB

PEERLESS PUMPS

For pumping hot or cold clear or vaporous liquids

Write today for Peerless Pump Bulletin No. B-2205. Profusely illustrated with pictures of both standard and self-priming pump types. Also contains sectional pump drawings, elevations and dimensional data, head-capacity characteristics.

Capacity: to 38 gpm.
Heads: to 800 ft.
H.P. Range: to 20 h.p.

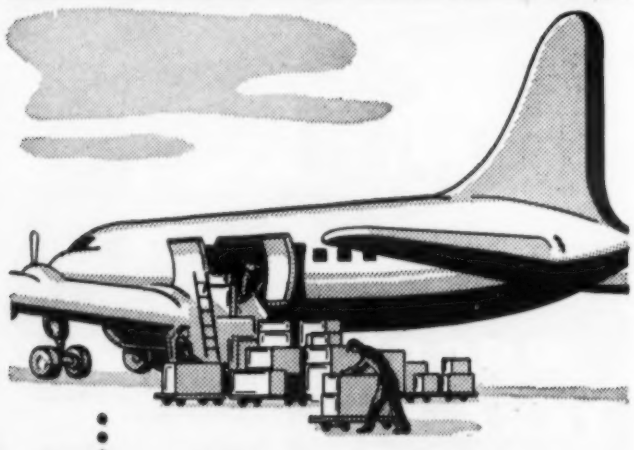


ILLUSTRATED—Close-coupled self-priming pump

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION

Los Angeles 31, California and Indianapolis 8, Indiana
Offices: New York, Chicago, St. Louis, Atlanta; Dallas, Plainview and Lubbock, Texas; Fresno, Los Angeles; Phoenix; Albuquerque, N. M.; Tulsa

For more details circle NED-885 E3 on enclosed inquiry slip



When Flying Freight

AETNA Plywood LIGHTENS THE LOAD

Nowadays just about every kind of product is shipped by air freight. Dollars in shipping costs are saved by manufacturers who lighten the load by using AETNA utility plywood for crates and boxes.

Leading makers of aircraft, too, lighten the weight of planes by using AETNA plywood for cabin walls, instruments panels, propeller blades and many other parts.

AETNA—*and only AETNA*—carries plywood from mills all over the world. Out of this wide range of stock AETNA furnishes plywood for any industrial or decorative use. Tough as many metals and *lighter in weight*, AETNA plywood costs less per square foot than any material you can compare with it.

AETNA'S engineering staff provides technical help so important to the efficient application of plywood. This service is FREE.

Call your nearest AETNA office or branch warehouse, or write, for prices, information and technical plywood help.

WRITE AETNA for the RIGHT PLYWOOD

AETNA PLYWOOD & VENEER CO.
1718 N. Elston Ave. • Chicago 22, Illinois
ARmitage 6-7100

BRANCH WAREHOUSES: Grand Rapids 7, Mich.; Indianapolis 2, Ind.; Rockford, Ill.

PLYWOOD for every purpose — every industry

For more details circle NED-886 E3 on enclosed inquiry slip

New Literature & Catalogs

Maintenance & Production Tools

Martindale Electric Co.—64-page illustrated catalog No. 29 contains illustrations, specifications, general information on diversified line of maintenance, safety and production equipment. Among many products listed are rotary files and burrs, flexible shaft equipment, grinding points, commutator and motor maintenance equipment, electrical testers, protective masks, blowers and vacuum cleaners.

For more details circle NED-887 E3 on enclosed inquiry slip

Gas Burner Tips & Heads

American Lava Corp.—Details and specifications of standard and special Alco burner tips are presented in 4-page illustrated bulletin 526. Special service is offered for small quantities. Physical characteristics for the line, including gas burner tips, radiant burner heads, carbon black and pilot tips, spuds, caps and removable disks and rings, are covered.

For more details circle NED-888 E3 on enclosed inquiry slip

Belt Conveyors

Conveyor Specialty Co.—Described and illustrated in 4-page folder are series L unitized belt conveyors, readily assembled from standard stock items. Covered are horizontal and inclined conveyors. Basic drive and take-up units are depicted and general specifications are given.

For more details circle NED-889 E3 on enclosed inquiry slip

Cutting Tools

Morse Twist Drill & Machine Co.—Objective of 303-page illustrated wire-bound catalog No. 87 is simplifying the application and usage of cutting tools. Volume is both numerically and marginally indexed and presents each tool on one page or on two facing pages. Technical and tabulated data is easy to use and a tap section has been added to the revised edition.

For more details circle NED-890 E3 on enclosed inquiry slip

Vises, Clamps & Positioners

Wilton Tool Mfg. Co.—Included in 28-page catalog 109 are over 100 illustrations, Federal specification references and technical data on a complete line of clamping tools. You will find many types of vises, work positioners, clamps and various other items described and illustrated.

For more details circle NED-891 E3 on enclosed inquiry slip

Locknuts & Collars

Standard Pressed Steel Co.—Two 4-page bulletins, No. 866 on Flexloc self-locking nuts and No. 868 on Hallowell steel shaft collars, give information in text and illustration on properties and applications. Latter booklet lists 42 standard sizes for shafts from 3/16 to 3 in. diameter. Locknuts are one-piece and do not have to seat to lock.

For more details circle NED-892 E3 on enclosed inquiry slip

SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire — no shock.
14. Castings are non-rusting aluminum alloy.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

For more details circle NED-893 E3 on enclosed inquiry slip

"Full pressure, Joe— Quaker hose can take it!"

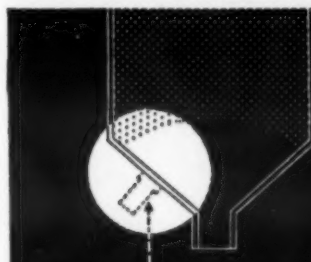
Quaker INDUSTRIAL HOSE

Quaker has it! Whatever your application . . . for steam, water, air . . . for acid or gas—heavy duty hose that must take a "beating" all day long, or a smaller size that is used for light work . . . Quaker hose is engineered with *your specific job* in mind. From tube to cover it's *built* for uninterrupted service and low maintenance cost.

Write for name of nearest Quaker distributor

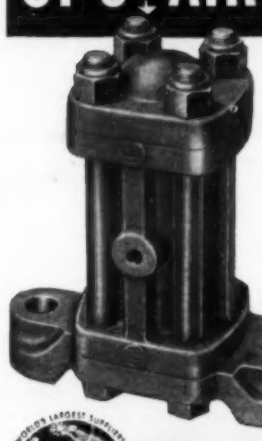
QUAKER RUBBER CORPORATION
DIVISION OF H. K. PORTER COMPANY, INC.
OF PITTSBURGH
Dept. D, Philadelphia 24, Pa.
Branches in Principal Cities

For more details circle NED-894 E3 on enclosed inquiry slip



WHEN BINS BECOME BOTTLENECKS... YOU NEED

SPO AIR VIBRATORS



Don't let arching, bridging and clogging bottleneck your production . . . keep materials flowing from bins, hoppers and chutes with SPO air vibrators. These low-cost units deliver powerful hammer-like blows which eliminate jamming of powdered and granular materials.

Exclusive feature of SPO air vibrators is a special corrosion-proof bronze alloy cylinder liner which assures full-power start, high-speed operation, low air consumption and maximum service life. 1232-SI

Write today for Bulletin 50.

SPO INCORPORATED
6475 GRAND DIVISION AVE. • CLEVELAND 25, OHIO

For more details circle NED-895 E3 on enclosed inquiry slip

Splice...Tap...Terminate with "Lock-Tite" Connectors

T&B ENGINEERED

Once tightened, T & B Lock-Tite connectors stay tight . . . on solid rod, tubing, or all types of cable from #4 to 1000 MCM.

Simply installed with a key wrench, Lock-Tite fittings have a built-in lock-washer and serrated saddle and socket to assure high-conductivity connections . . . they can be used over and over.

LOCK-TITE LUG — All-around pressure prevents damage to cable strands. Seven sizes fit all cable sizes from #4 to 1000 MCM.

LOCK-TITE TEE-PARALLEL TAP — Use as a tee, parallel, elbow, two-way or reducing connector. Hinged top hooks to the "main"; lower opening holds the "branch".

LOCK-TITE TWO-WAY CONNECTORS — Use as an end-to-end connector or reducer. Each cable separately held by individual serrated saddles.

For complete information on T & B Lock-Tite connectors send for a free folder. T320

THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada

For more details circle NED-896 E3 on enclosed inquiry slip

Drills at your fingertips—
HUOT DRILL DISPENSER

Why rummage through a box full of drills when the Huot Drill Dispenser will keep them sorted by sizes? Each compartment holds many drills—several dozen in the smaller sizes. Beautiful light gray hammerlin baked enamel finish. *Made in three models for fractional, number and letter drills.*

Write for Drill Dispenser Bulletin

HUOT DRILL INDEX

The simplest filing system for all twist drills. Panels fold into container like pages of a book. Seventeen models for drills from No. 80 wire gauge to 1-inch size.

HUOT

HUOT MANUFACTURING CO.
571 North Wheeler Street, St. Paul W4, Minn.

For more details circle NED-897 E3 on enclosed inquiry slip

NO BREAKS WITH PENFLEX ON TANK SETTLEMENT

PENFLEX FLEXIBILITY
ALLOWS LINES TO WALK WITH TANK

Heat . . . cold . . . tank settling—all made rigid pipe on oil storage tanks move, bend and break. Then Penflex "Flexineering" solved the problem. Pipe breakage was eliminated with a length of 12" I.D. four-wall interlocked, specially packed Penflex tubing . . . installed with tight-packed flanges. Now any amount of thermal expansion or tank settling can occur with no leaks, breaks or spillage.

Penflex tubing is tight as a pipe . . . yet flexible under all conditions. Let Penflex engineers help solve your tubing problems. Penflex manufactures a complete line of four-wall interlocked and seamless welded corrugated flexible tubing . . . metallic hose and couplings from ⅛" I.D. and up. Write for folder "Flexineering"—solve your tubing questions.

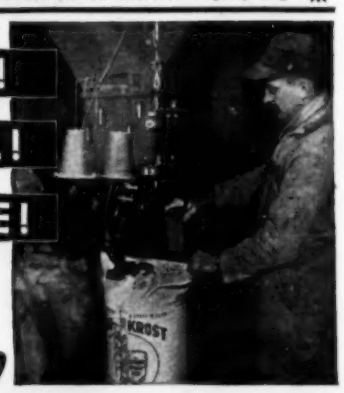
Write for this helpful folder, "Flexineering."

Pennsylvania Flexible Metallic Tubing Co., Inc.,
7208 Powers Lane, Phila. 42, Pa.

PENFLEX
HEART OF INDUSTRY'S LIFE LINES

For more details circle NED-898 E3 on enclosed inquiry slip

PORTABLE!
PRACTICAL!
PROFITABLE!



Union Special SUSPENDED HEAD
BAG CLOSING MACHINES

Portability, versatility, and simplicity of operation make Union Special Suspended Head Machines ideal for all-around bag closing operations in small plants, and well-suited for utility or stand-by duty in large plants. Users have found that machines can be used to produce neat, strong closures on virtually all types of paper or cloth bags. Initial cost is low; installation is simple and inexpensive. You can hang them up any place and go to work!

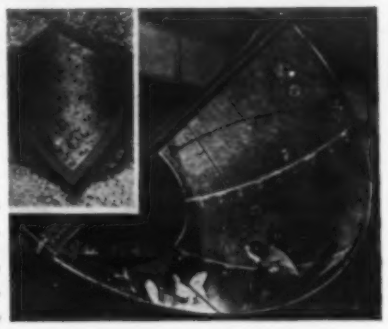
Send for this NEW BULLETIN!

Get your copy of Bulletin No. 200 containing illustrations and helpful data charts for the complete Union Special line of bag closing machines. UNION SPECIAL MACHINE CO., 416 N. Franklin St., Chicago 10, Ill.

For more details circle NED-899 E3 on enclosed inquiry slip

New Processes & Materials

CORROSION-RESISTANT ALLOY is easy to form and weld and has good high-temperature properties



Although still under extensive tests, Hastelloy F, a recently developed nickel, molybdenum, chromium and iron alloy, has thus far shown remarkable corrosion resistance, toughness, cold-forming ductility and high-temperature properties. Alloy has resisted, with little or no pitting, 20 per cent sulphuric acid solutions, boiling 70 per cent phosphoric acid, 5 per cent ferric chloride plus 10 per cent sodium chloride, 42 per cent magnesium chloride, 65 per cent nitric acid and 25 months exposure to sea water.

Electrical resistance is slightly higher than 18-8 stainless while thermal expansion is about 10 per cent lower. Alloy is nonmagnetic and can be metallic arc, inert gas, shielded arc and resistance welded. Main picture shows intermediate seam welding being done inside dome of paper and pulp digester which is lined with the new alloy. Tests showed corrosion rates of less than 0.001-in. per year in both alkaline and acid pulping digesters. Photo insert shows alloy sheet spot welded to carbon steel plate and hot-formed around 10-in. I.D. punch. Linings have successfully passed tests for thermal shock, fatigue, shear strength, bond strength, hot-forming and hot-bending. Developed by **Haynes Stellite Co.**, Box 746, Kokomo, Ind.

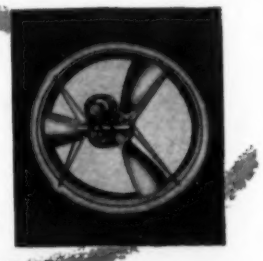
For more details circle NED-900 E3 on enclosed inquiry slip

PLASTIC PIPING for jet water well systems

Actually two plastic pipes in one, Twinduit pipe is designed for use with jet water well systems. It consists of two pipes, extruded simultaneously and joined in perfect alignment with a thin web of the same material. Piping works into the well without pinching, forcing and or binding. Plastic is rot, rust and electrolytic corrosion resistant and is made in three pipe sizes measuring 1 x 1¼ in., 1¼ x 1¼ in. and 1¼ x 1½ in. Coils are 200 and 240 ft long. Plastic pipe and fittings for plastic-to-plastic and plastic-to-metal connections are made by **Yardley Plastics Co.**, Parsons & Town St., Columbus 15, O.

For more details circle NED-901 E3 on enclosed inquiry slip

HARTZELL Versatility pays off for Mittag & Volger



At the Park Ridge, N. J., plant of Mittag & Volger, Inc., manufacturers of carbon paper and inked ribbons, more than 20 Hartzell units are proving that it pays to rely on Hartzell for the *right* fan or blower to meet *any* industrial air-moving need.

Proof of Hartzell versatility? Look at the variety of the installations at Mittag & Volger. They include Lo-Noise fans (shown above) for quiet ventilation, prefabricated duct fans for ventilation of interior rooms, and roof ventilators and unit heaters.

Hartzell has been a leader for more than a quarter of a century because Hartzell concentrates on one objective—more efficient, more economical air-moving equipment for *industry*. Your nearby Hartzell field office puts this engineering "know-how" right in your back yard.

Send us the details of your air-moving problem today. (And ask for Catalog B-10 announcing the *new* Hartzell centrifugal blower line.)

HARTZELL propeller fan co.
Div. of Castle Hills Corp.
Dept. G, PIQUA, OHIO

ENGINEERING OFFICES IN PRINCIPAL CITIES

For more details circle NED-902 E3 on enclosed inquiry slip

THIS IS LOW COST WELDING!

When a touch on a button moves weldments like these into the correct, most convenient position for a down hand pass, you get more arc time, more welding at lower cost. C-F power operated Positioners rotate the work in a full circle at any point in a range of 135° from the horizontal — giving welders a choice of an infinite number of downhand welding positions instantly.

Every requirement for faster, better positioned welding — constant or variable speed table rotation, full 135° tilt, self-locking gearing which holds the table in any position, oversize built-in main tilt and rotating bearings, choice of two base styles, and many other features — are built into C-F Positioners.

C-F Positioners are available in Hand or Power operated models, and are made in capacities up to 30,000 lbs. and larger.

Write for the new C-F Positioner Catalog.
CULLEN-FRIESTEDT CO., 1304 S. KILBOURN AVE.
CHICAGO 23, ILLINOIS

CULLEN-FRIESTEDT CO., CHICAGO 23, ILL.
C-F positioned welds mean better, more economical welds

For more details circle NED-903 E3 on enclosed inquiry slip

Lufkin Now Rust-Proofs Precision Instruments with *paper!*

Wrap Out Rust with NOX-RUST Vapor-Wrapper

New Chemically Active Paper Gives Fast, Clean Rust-Proofing—at far lower cost!

VAPOR-WRAPPER—easy to use as wrapping paper—rust-proofs machine parts and delicate instruments at lowest cost . . . delivers them to your customers "factory fresh," ready for use!

Like many other major manufacturers, Lufkin Rule Co. uses Vapor-Wrapper to protect its delicate precision instruments from damaging rust.

The chemical *within* Vapor-Wrapper—an exclusive development of NOX-RUST laboratories—makes moisture laden air non-corrosive . . . *without the need for an air-tight package* . . . without deposits forming on the metal. Cut costs and improve service in *your* business with Vapor-Wrapper!

Vapor-Wrapper conforms to Military Specifications, MIL-P-3420, Packaging Materials, Volatile Corrosion Inhibitor Treated.

Write for full details on Vapor-Wrapper today!

NOX-RUST VAPOR WRAPPER

NOX-RUST Chemical Corporation
2467 S. Halsted Street, Chicago 8, Illinois
Offices in Principal Cities

NOX-RUST Chemical Corporation
2467 S. Halsted, Chicago 8, Ill.
Please send me your booklet on Vapor-Wrapper, the rust-preventive paper that *wraps out rust.*
Name.....*Title*....
Firm Name.....
Address.....
City.....*Zone*....*State*.....
MAIL TODAY

For more details circle NED-904 E3 on enclosed inquiry slip

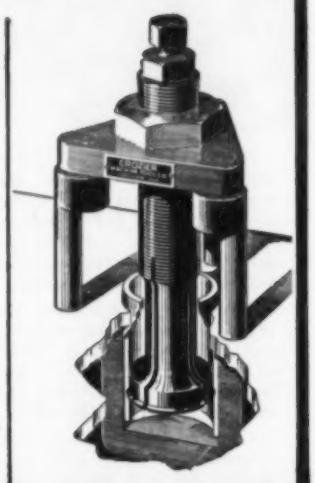
NEW EXTRACTOR

removes bushings from blind holes

...cuts time 75 per cent

The entirely new method of extracting bushings, bearings, sleeves, liners, etc. Eliminates necessity for machining, minimizes the hazard of injury to casings or excessive dismantling of equipment, handles holes from ½ to 2"—over 5 tons have been extracted with unit. Eliminates as much as 75 per cent of labor and time, slashes inventory.

For complete information write Department NED-5



CROZIER *Machine Tool Co.*

684 NO. PRAIRIE AVENUE, HAWTHORNE, CALIFORNIA

▲ For more details circle NED-905 E3 on enclosed inquiry slip ▲

Sheehan's INDUSTRIAL CONVEYORS

FLAT TOP METAL BELT CONVEYORS

Versatile Durable Economical

Sheehan Flat Top Conveyors are being used to speed production parts through infra-red ovens, washing and degreasing operations. They are being used by food packing, metal working and many other industries in indoor installations and out of doors.

Metal belts of galvanized steel, electro-cadmium plated or stainless steel, driven by Sheehan Positive Drive Belt Sprocket assure production under many difficult conditions.

Sheehan Conveyors are designed to further production automation in every industry.

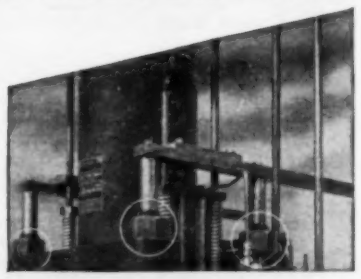
See SHEEHAN'S STANDARD CONVEYORS in operation! Philadelphia Materials Handling Show, May 18-22nd, Booth 809.

Conveyors

R. T. SHEEHAN CO. PLYMOUTH, MICH.

▲ For more details circle NED-906 E3 on enclosed inquiry slip ▲

HOLDING THE PRESSURE LINE



WITH *Security*

THREE of the four Security Locknuts used on the tie rods of one of the many models of the F. J. Stokes Machine Company's Fully Automatic Plastic Molding Presses. These nuts must maintain their accurate adjustment against the extreme pressures developed by the movable platen.

With Security the load is carried by the body of the nut itself, not by the *Locking Insert*.

Security Locknuts are vibration proof. They are installed like an ordinary nut. Nothing to adjust—no holes to weaken bolts — nothing to shear — and a Security Nut does not require bolt tension to hold it. It stays "put" where you wrench it and can be removed and replaced *any number of times!* Authoritative tests have proved Security Locknut holding power.

Challenge us to solve your toughest fastener problem and ask to see these tests.

Send the coupon

Security

SECURITY LOCKNUT CORP.
1510 North Ave.
Melrose Park, Ill.

THE NUT YOU CAN'T SHAKE LOOSE

Please send me without obligation:
☐ A Thread Tolerance Chart.
☐ We have a fastener problem and would like to know more about Security Locknuts.

Company Name .....
Address .....
Town ..... Zone ..... State .....
Signed .....

▲ For more details circle NED-907 E3 on enclosed inquiry slip ▲

New Literature & Catalogs

Automatic Boilers

Boiler Engineering & Supply Co.—Detailed engineering data and specifications plus features and advantages of Continental automatic boilers are fully described in 4-page illustrated booklet. Models cover a size range from 20 to 500 hp, are guaranteed 80 per cent efficient.

▲ For more details circle NED-908 E3 on enclosed inquiry slip ▲

Utility Vise

Brown Engineering Co.—Folder describes all features of the utility vise, which eliminates the many holding devices required in setting up work on drill presses, millers, grinders, etc. This versatile unit will often eliminate the need for costly jigs. Specifications and applications of the two available models are included.

▲ For more details circle NED-909 E3 on enclosed inquiry slip ▲

Air & Vacuum Pumps

Leiman Bros., Inc.—Catalog 752 details construction and operating features of four and two-wing rotary positive air and vacuum pumps, which are designed for applications requiring up to 29.9 in. vacuum and 25 psi. Tables of vacuum, pressure and specifications are given for each pump. Catalog also covers air motors and accessories.

▲ For more details circle NED-910 E3 on enclosed inquiry slip ▲

Indexing Mechanism

Ferguson Machine & Tool Co.—Roller gear drive is a new type of indexing mechanism designed to replace Geneva drives and other indexing devices. Bulletins 101, 102, and 103 which form part of a file folder, explain characteristics of the drive, how to determine the type and how to select the correct standard model for any application.

▲ For more details circle NED-911 E3 on enclosed inquiry slip ▲

Notching Units

Wales-Strippit Corp.—Independent, self-contained units that will notch mild steel up to ½ in. thick are the subject of catalog N, which has 20 pages of engineering drawings, photos, specifications and data. Units are designed to permit the same group to be used in unlimited setups in stamping presses and press brakes, each unit being independently mounted to provide quick setups in varying patterns.

▲ For more details circle NED-912 E3 on enclosed inquiry slip ▲

Riveted Roller Chain

Chain-Belt Co., Baldwin-Duckworth Div.—24-page bulletin 52-2 describes multiple width roller chain with special riveting system that is easily assembled and disassembled. Assembly diagrams and charts for all size chains are presented as well as prices and boxed assembly specifications. Two photo-caption-type pages give clear picture of chain make-up procedure.

▲ For more details circle NED-913 E3 on enclosed inquiry slip ▲

NEW...LIGHTWEIGHT...NON-CORROSIVE

UDYLITE LAMINEX TANKS

Udylite Laminex tanks of molded fiberglass have many of the advantages of aluminum or stainless steel yet cost less.

In addition to this important low initial cost, Udylite Laminex tanks have these unique features—

- Non-corrosive inside and out. They're easy to clean, too.
- Electrically non-conductive.
- Extremely lightweight. A 2'x2'x3' tank weighs only 60 lbs!
- If accidentally damaged, can be quickly and easily repaired, in place.
- Capacities are from 25 to over 500 gallons, and depths up to six feet are available.

For full information on prices and sizes, call your Udylite Technical Man or write direct.
THE UDYLITE CORPORATION
DETROIT 11, MICHIGAN

THE *Udylite* CORPORATION

▲ For more details circle NED-914 E3 on enclosed inquiry slip ▲

FREE

Jar of PROTECT-O-METAL No. 2, the smokeless, odorless, non-toxic, spatterproofing compound that lets you wipe off weld-spatter—save 85% of cleaning time and labor. Write for your free sample today!

PROTECT-O-METAL POM

G.W.SMITH

G. W. SMITH & SONS, INC., 5406 Kemp Road, Dayton, O.

▲ For more details circle NED-915 E3 on enclosed inquiry slip ▲

In Your Plant THERE ARE PICTURES LIKE THIS

If YOU HAVEN'T CHANGED TO THE SABIN BARREL TRUCK

Sabin ONE MAN way of handling barrels and drums saves labor.

This method is simple. You run truck up to container, hook on at top and pull back on handle to pick up loads weighing as much as 800 pounds.

Third Wheel Feature gives better balance—and makes handling safer, too.

WRITE FOR BULLETIN NO. 48-A
THE SABIN MACHINE CO.
6536 Carnegie Ave.
CLEVELAND 3, OHIO

▲ For more details circle NED-916 E3 on enclosed inquiry slip ▲

P-S AIR SAVER leak proof AIR VALVE

—For Maximum Machine Tool Efficiency—give you perfect, leak-proof air power control every split-second of machine tool operation. Ideally suited where air is used for cleaning, drying, cooling, positioning or ejecting. Recommended around punch presses, die casting machinery, drill presses, in reaming, broaching and many other operations. Provide ample air volume for operation of single or multiple jets. Mount in any position, to operate at any angle unaffected by vibration. Immediate Delivery

Palmer-Shile Co.

16015 FULLERTON AVE., DETROIT 27, MICH.

▲ For more details circle NED-917 E3 on enclosed inquiry slip ▲

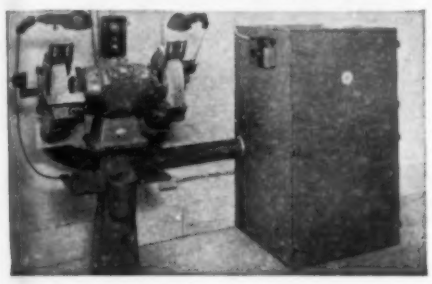
CONTROL COSTS

Stop human errors in reading, remembering, recording! Toledo Printweigh Scales provide accurate printed weights . . . *accurately* recorded. Send for bulletin 2021. Toledo Scale Co., Toledo 1, Ohio.

TOLEDO®
Headquarters for SCALES

For more details circle NED-918 E3 on enclosed inquiry slip

SAFE your plant, too, can be safe



FROM ABRASIVE DUST HAZARDS WITH

TORIT DUST COLLECTORS

Here is a safe grinding installation. Guarded wheels, localized lighting, a well placed starting switch, and most of all hoods and piping leading to a Torit Dust Collector. Here no abrasive dusts will hamper working conditions or cause damage to finished parts or expensive equipment.

To *score* top production in your plant play it *safe*. Equip machines with Torit Dust Collectors. There are types for all standard dust problems and for *inning* after *inning* they'll keep your plant from being caught *off-base* by uncomfortable and dangerous dust conditions. Your team will *play ball* right up to the last pitch.

Torit Door Fastener
The sturdy and efficient door fastener used on Torit cabinets is available for use on your own products. Strike plate either flat or angular. Write for quantity prices.

use our catalog in MACHINE TOOL CATALOGS or write for copy

Get the complete *line-up* by writing
TORIT **MANUFACTURING CO.**
298 Walnut Street St. Paul 2, Minn.

For more details circle NED-919 E3 on enclosed inquiry slip

You get *Longer* service life with STAR-KIMBLE squirrel-cage motors

because extra insulation provides added safety factor. Prelubricated bearings run for years without attention. Ventilating fan keeps motor windings cool. Dynamic balancing of rotor minimizes vibration. Get the full story on these and other features of Star-Kimble squirrel-cage motors — ask for Bulletin B-201.

*Demanded by industry for tough start-and-stop jobs.

STAR-KIMBLE
MOTOR DIVISION
MIEHLE PRINTING PRESS AND MFG. CO.
214 Bloomfield Ave. Bloomfield, N. J.

For more details circle NED-920 E3 on enclosed inquiry slip

New Processes & Materials

STEEP-ANGLE CONVEYOR BELT
rigged surface grips packages

Special ridged and cross-cut rubber surface of the Griptop conveyor belt facilitates handling of packages and cartons up or down grades as steep as 55 degrees.

The flexible, molded rubber ridges stand ¼-in. high, are parallel and run across belt width. They are cross-cut to form more than 5700 tiny gripping blocks of rubber every square foot. Belt is also self-cleaning. As it travels around pulleys, ridges fan out and release lodged materials. Belt affords space savings in that a 45-degree installation requires 42 per cent less floor space than one designed at 30 degrees. Conveyors can also be shorter. Belt is made by **B. F. Goodrich Co.**, Dept. E, 500 S. Main St., Akron 18, O.

For more details circle NED-921 E3 on enclosed inquiry slip

FOAM TYPE INSULATION
lightweight material developed for low temperature applications

Colfoam, a plastic foam for insulation purposes, has a K factor of 0.18 at a mean temperature of 75° F and weighs 0.8-lb per cubic foot. Its use is reported to reduce space required for insulation by at least 20 per cent. Applications include freezers and refrigerators, frozen food shipping containers and refrigeration insulation for trucks, railroad cars and airplanes. Other uses are flotation and sound proofing. Material absorbs comparatively little moisture, is chemically inert under low temperature conditions, will not support combustion and is satisfactory for use with sustained temperatures up to 120° F. It is available in block, slab and shredded form. Made by **Colton Chemical Co.**, Colfoam Div., 1545 E. 18th St., Cleveland 14, O.

For more details circle NED-922 E3 on enclosed inquiry slip

Partners . . . . YOU AND YOUR
NO. 50 POCKET PAL

$1.00 AT YOUR LOCAL DEALER
CATALOGUE NO. 49 AVAILABLE UPON REQUEST

.030 MATTE FINISH MATHEMATICAL QUALITY DOUBLE-CURED PLASTIC, ALL HOLES SMOOTH-MILLED TO ENGRAVING MACHINE ACCURACY.

ONE OF MORE THAN 30 RAPIDESIGN TIME-SAVER TEMPLATES — ALL OF WHICH ARE BETTER MADE, MORE USEFUL AND LESSER PRICED.

RAPIDESIGN INC.
P. O. BOX 592 GLENDALE, CALIF.

For more details circle NED-923 E3 on enclosed inquiry slip

cut costs · clean efficiently
cold steam

widely used in these industries:
Air Craft, Automotive, Bakeries, Breweries, Cement, Ceramics, Cheese, Construction, Distilling, Electrical, Food Processing, Foundries, Jewelry, Leather, Meat Packing, Machine Shops, Marine, Mining Equipment, Oil & Refinery, Optical, Paper, Pharmaceutical, Public Utilities, Repair Services, Railroad, Rubber, Ship Building, Stone Polishing, Textile, Tobacco, Transportation

✓no back splash
✓blasts stubborn dirt
✓harmless to finest finish

HYDRO·AIR PRESSURE WASHER $9.95

Connects to regular air and hot or cold water supply. Precise control of air and water blasts heavy dirt and grease or rinses sheets and small parts with a penetrating spray.

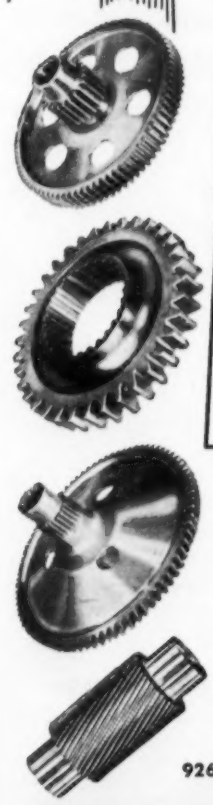
D & M PRODUCTS, INC.
30 North Raymond Avenue • Pasadena 1, California

Order through your regular supplier of cleaning compounds, or direct.

For more details circle NED-924 E3 on enclosed inquiry slip

WARNING to GEAR USERS!

Specifying "Ground" Gears or "Shaved" Gears does not ensure accuracy →



"MEASURED TOLERANCES"
Must Be Had To

- eliminate embarrassing failures
- eliminate breakdown repairs
- increase gear life
- reduce noise, vibration
- reduce assembly costs
- carry greater loads and speeds safely

We'll come and show you how to get the measured tolerances and the resulting advantages!

There will be no charge for this service.

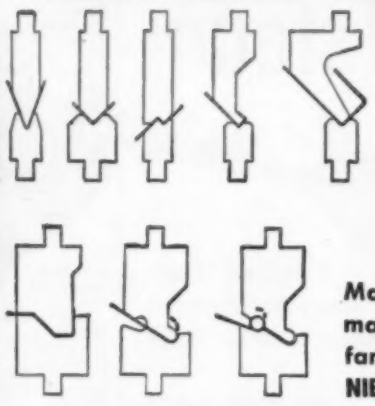
Sier-Bath GEAR and PUMP CO., Inc.
9268 Hudson Boulevard, North Bergen, New Jersey

Founded 1905 Member A.G.M.A.
Sier-Bath PRECISION GEARS
Proven accuracy where required!

Also manufacturers of Rotary Pumps . . . Flexible Gear Couplings

For more details circle NED-925 E3 on enclosed inquiry slip

BRAKE DIES



MADE FROM FORGED CHISEL STEEL BILLETS

Made by the makers of the famous SEMCO NIBBLER PRESS

- MANY STILL IN USE EVEN AFTER 10, 20 and even 30 YEARS.
- THEY COST MORE BUT THEY LAST FOR YEARS.

Write for Estimates on Your Work and Ask for Latest Literature

SEMCO

SERVICE MACHINE COMPANY INCORPORATED

202 MILLER STREET, ELIZABETH, N. J.

▲ For more details circle NED-928 E3 on enclosed inquiry slip ▲

Better rubber products are made with Du Pont NEOPRENE

Courtesy: Tingley Rubber Corp., Rahway, N. J.

Neoprene overshoes resist oils, solvents, acids...give lasting service on the job

There's extra durability in these lightweight neoprene overshoes. And there's extra comfort and convenience, too. Neoprene's toughness eliminated the need for the usual fabric liner—resulting in better flexibility and a smooth, easily cleaned inner surface.

Workmen can pull on these overshoes in a jiffy—even over thick-soled work shoes—and be ready for any kind of job. For neoprene resists attack from oil, grease and most chemicals . . . withstands abrasion to a remarkable degree. This means dependable performance in chemical plants, creameries, gas stations and other locations where ordinary overshoes soon fail. Rugged as they are, these new overshoes have amazing stretching properties—only three sizes fit most shoes.

Here, neoprene's remarkable properties make possible a more serviceable variation of an old stand-by. Thousands of other resilient products have been similarly improved with neoprene to assure longer service life. While Du Pont makes no finished goods of neoprene, your manufacturer or distributor will be glad to tell you about the neoprene products he supplies.

FREE! THE NEOPRENE NOTEBOOK

Each issue describes new neoprene products . . . improved old products . . . tips on reducing maintenance costs. Write today for your free subscription. E. I. du Pont de Nemours & Co. (Inc.), Rubber Chemicals Div. NE 5, Wilmington 98, Delaware.

NEOPRENE

The rubber made by Du Pont since 1932

DU PONT

BETTER THINGS FOR BETTER LIVING . . . *through Chemistry*

▲ For more details circle NED-929 E3 on enclosed inquiry slip ▲

New Literature & Catalogs

Miniature Snap Switch

Sessions Clock Co., Tyniswitch Div.—Constructional and operating characteristics of the Tyniswitch miniature limit switch are featured in 6-page illustrated folder 101. Specifications and standard adaptations of this high-rated miniature switch are fully detailed. Switches feature high corrosion and vibration resistance.

▲ For more details circle NED-930 E3 on enclosed inquiry slip ▲

AC Across-Line Starting Switches

Allen-Bradley Co.—24-page wiring diagram booklet describes many applications of Bulletin 709 magnetic across-the-line starting switches. Both line and wiring diagrams are given. Diagrams cover one, two and three-phase systems, jogging, two-wire control, pump operation, thermostat control, sequence control and many others.

▲ For more details circle NED-931 E3 on enclosed inquiry slip ▲

Adjustable Ramps

Rowe Methods, Inc. — The Adjust-A-Dock and Adjust-A-Truck loading dock ramps are described and illustrated in 4-page brochure. Former unit bridges between different height docks and rail cars or trucks, while latter unit, set into pavement in front of dock, hydraulically adjusts each vehicle to dock height. Its capacity is 40,000 lb.

▲ For more details circle NED-932 E3 on enclosed inquiry slip ▲

Tool Holding System

Marvic, Inc.—"The Marvic Machinists Operating Manual" is 38-page illustrated pocket-size booklet describing the Marvic system of holding cutting tools for all lathe operations. System provides rigidity that allows deep cut to be made under full lathe power without chatter or vibration. It accommodates full range of tools and allows fast interchangeability.

▲ For more details circle NED-933 E3 on enclosed inquiry slip ▲

Electrical Controls Catalog

General Electric Co., Trumbull Electric Dept.—The 1953 edition of the "Trumbullist" general catalog contains complete listings of safety switches, circuit breakers, service entrance equipment, motor controls and line of panelboards. Page of self-addressed post cards inside back cover facilitates sending for further information on particular products.

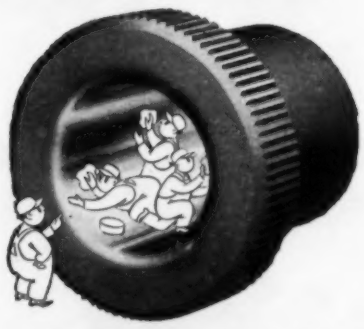
▲ For more details circle NED-934 E3 on enclosed inquiry slip ▲

Temperature Measurement & Control

Partlow Corp. specializes in mercury bulk instrumentation and produces wide range of equipment in this field. Full details on this equipment is contained in 24-page illustrated guide No. 101 which is entitled "The Design and Process Engineer's Guide to Industrial Temperature Measurement and Control." It's yours for the asking.

▲ For more details circle NED-935 E3 on enclosed inquiry slip ▲

SUPER FINISH OF UNIVERSAL DRILL BUSHINGS reduces tool wear to a minimum



One sure way to cut excessive tool wear in your operations is to specify Universal Drill Bushings because their superfinish bores help reduce wear on production tools to an absolute minimum, especially in close tolerance work. The blended radius on the top inside diameter helps prevent tool hang-up and breakage. 100% concentricity and hardness tests insure accuracy, uniform high quality and long life. Knurled heads provide a quick, sure grip. Universal Drill Bushings are produced in a complete range of standard sizes and lengths. Orders for special dimensions will receive prompt attention. For complete information, write to the office nearest you—Universal Engineering Sales Co., 1060 Broad St., Newark 2, N.J.; 5035 Sixth Ave., Kenosha, Wis. — or our home office.

UNIVERSAL ENGINEERING COMPANY

FRANKENMUTH 5, MICHIGAN

171-A

▲ For more details circle NED-936 E3 on enclosed inquiry slip ▲

Speed Up Material Handling

Here's a handy, mobile crane for lifting or loading jobs around your plant. Ideal for dismantling, moving or erecting machinery . . . loading and unloading structural iron, pipe, bars, lumber and equipment of all types. The UNIT 357 is self-propelled . . . rides on rubber at road travel speed . . . is easy to maneuver even in cramped yard conditions. Operated by ONE man . . . powered by ONE engine . . . swings in a 360° circle. Full vision cab gives complete visibility. Promotes Safety. Write for Catalog.

UNIT CRANE & SHOVEL CORP.

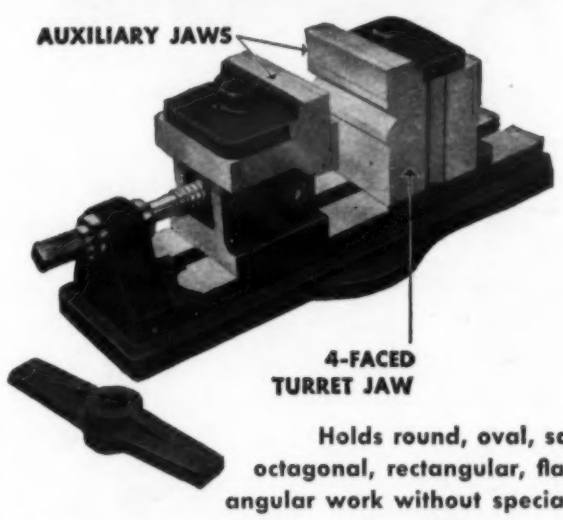
6607 W. Burnham Street, Milwaukee 14, Wis., U. S. A.

UNIT

CRANES • CLAMSHELLS • MAGNETS

▲ For more details circle NED-937 E3 on enclosed inquiry slip ▲

SAVE SET-UP TIME



Holds round, oval, square, octagonal, rectangular, flat and angular work without special jigs.

Both men and machines put more time on productive work when Brown Vises are used because turret jaw faces and auxiliary jaws eliminate time wasted in "rigging" set-ups.

Quality is improved because husky vise (it weighs 96 lbs) holds work tight. Jaws open to 9½ inches. Clamping flange surrounds entire vise.

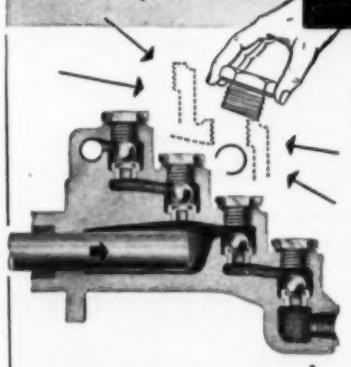
For complete specifications and prices write for Bulletin 23Y, Brown Engineering Co., 129 N. 3rd Street, Reading, Pa.

BROWN UTILITY VISES

▲ For more details circle NED-938 E3 on enclosed inquiry slip ▲

This exclusive Milton Roy Liquid End Step-Valve...

Helps Processor Get... 2 to 1 PUMP SERVICE LIFE



ASSURES HIGH AND REPRODUCIBLE VOLUMETRIC EFFICIENCY. Inspection, servicing, or thorough cleaning of individual ball-checks and seats are effected without disturbing piping or other ball-checks and seats.

A Milton Roy Motor-Driven Controlled Volume Pump is still going strong in a leading chemical plant after 4½ years of operation . . . has needed very little maintenance. A previously employed chemical feed pump, on the other hand, lasted only 2½ years . . . required considerable maintenance.

Unusual? No. Long service life is just one of many reasons why rugged Milton Roy Pumps are in wide use throughout industry.

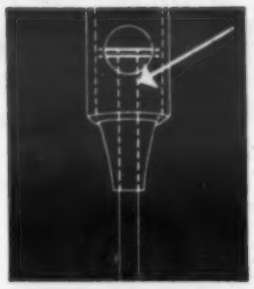
Capacity of these pumps is from 3 milliliters per *hour* to 45 gallons per *minute*, against pressures to 25,000 pounds per square inch. They meter practically any liquid, either as units or component parts of automatic systems. Ask for your free copy of New Bulletin No. 553.

MILTON ROY COMPANY

1304 E. MERMAID LANE • PHILADELPHIA 18, PA.

▲ For more details circle NED-939 E3 on enclosed inquiry slip ▲

Tube Talk THE "HOW-TO" COLUMN



PROBLEM:
The B.G. Corporation, makers of B.G. Spark Plugs, had trouble locating tubing with very close I.D. tolerance and good fabrication properties for electrodes of jet engine igniters that would withstand corrosive action of gases at 1800°F. Most materials corroded or eroded rapidly.

SOLUTION:
Superior Inconel* tubing .196/.200 O.D. x .129/.131 I.D.

RESULTS:
Superior Inconel tubing provides better resistance to erosion and corrosion than any other materials used, has low thermal expansion so that it doesn't crack ceramic insulation, is easy to flare, ream and mill. It is not adversely affected by hydrogen brazing.

Suggestion—Write for information and literature today.

SUPERIOR TUBE COMPANY
2018 Germantown Ave., Norristown, Pa.

*Reg. U.S. Trade mark—The International Nickel Company.

For more details circle NED-940 E3 on enclosed inquiry slip

ALL-PURPOSE SLINGS

with new Roebling Tapered Sleeve Splice . . . stronger . . . cost less!

NEW ROEBLING All-Purpose Slings with the Tapered Sleeve Splice are delivered ready for the job. The unique rolled loops and tapered sleeve attachments develop the full strength of the rope...cost less than ordinary tucked splices... save "splicing your own".

Made of Roebling "Blue Center" Steel Wire Rope, All-Purpose Slings are unsurpassed for toughness and dependability...flexible and easy to handle...come in all standard lengths and sizes. Send for full information and for the free "Sling Data Book." John A. Roebling's Sons Corporation, Trenton 2, New Jersey.

A subsidiary of The Colorado Fuel and Iron Corporation

ROEBLING

For more details circle NED-941 E3 on enclosed inquiry slip

NEW TURNTABLE DOWNDRAFT dust collecting benches by WOLVERINE

Revolving turntable allows the operator to work all around the casting without stop for re-positioning . . . an addition to the standard Wolverine rectangular benches — Provides: • Better dust collection due to higher velocity. • New design, permitting exhaust outdoors where required, or return to room if desired. • Standard velocity, 300 feet per minute, and, if application requires, higher velocities available up to 800 feet per minute. • Ideal system for collecting dust from grinding, polishing and sanding operations.

Heavy duty industrial viscous filters in rear compartment remove dust from air stream and axial flow fan in top of rear compartment discharges vertically back into the room or outdoors if required.

Write for descriptive bulletin, Dept. N

WOLVERINE EQUIPMENT CO.
31 MAIN ST., CAMBRIDGE 42, MASS.

For more details circle NED-942 E3 on enclosed inquiry slip

New Processes & Materials

INDUSTRIAL LAYOUT TAPES
variety of preprinted components

Method of preparing industrial materials handling system layouts employs wide variety of reprinted pressure-sensitive components on tape. Included are tapes representing belt, drag chain, gravity wheel, overhead monorail, straight and curved roller and slat conveyors, scaled ¼-in. to the foot. Structural components tapes consists of various aisle sizes, building column shapes, power and telephone outlets, stairs and windows. Others include broken and solid lines, reference numbers and letters and colored arrows. All patterns are available on rolls of transparent self-adhering tape, with many also available on opaque tape. Transparent and opaque plastic layout boards with grid lines spaced at ¼-in. intervals are made in several sizes. Made by **Chart-Pak, Inc.**, 104-8 Lincoln Ave., Stamford, Conn.

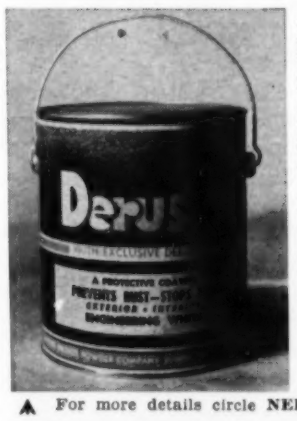
For more details circle NED-943 E3 on enclosed inquiry slip

GLASS INSULATION
for motor and transformer use

Electro Flexoglas has high dielectric and mechanical strength and good flexibility which is not lost at elevated temperatures. It can be applied to rotating equipment as a coil wrap, and is applicable to layer and phase insulation as well as barrier insulation for motors and transformers. Available in 0.010 and 0.012-in. sizes. Made by **Sun Chemical Corp.**, Electro-Technical Products Div., 113-A E. Centre St., Nutley 10, N. J.

For more details circle NED-944 E3 on enclosed inquiry slip

ANTIRUST PAINT
colors now include white

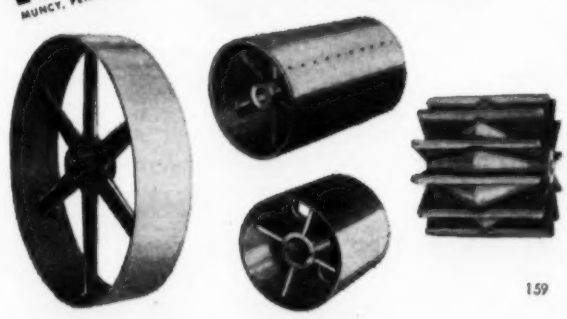


Added to present line of Derusto rust-preventive finishes is Engineering white, practical for use where high sanitation finish is desired as well as protection against rust. Finish does not contain lead and is suitable for processing plants, packing houses and many other similar uses. Made by **Master Bronze Powder Co.**, Dept. NED, Hammond, Ind.

For more details circle NED-945 E3 on enclosed inquiry slip

SPROUT WALDRON S/W MUNCY, PENNSYLVANIA — PULLEYS

SOLID FACE and BELT SAVER



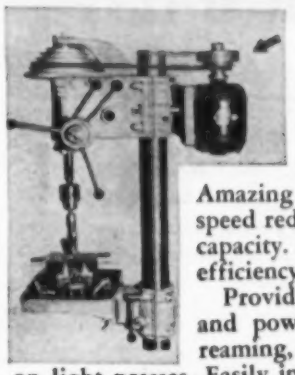
In handling rough, abrasive materials, S/W exclusive Belt Saver Pulleys are lengthening belt life as much as 400%. Equally well recognized is the S/W Blue Face Pulley Line in standard and made-to-order types and sizes. Write today for literature. Sprout-Waldron & Co., Inc., 8 Logan Street, Muncy, Penna.

Vertical Mixers, Attrition Mills, Rotary Feeders, Ribbon Type Mixers, Crushers, Knife Cutters, Continuous Mixers, Roller Mills, Separators, Pulleys

SPROUT-WALDRON

For more details circle NED-946 E3 on enclosed inquiry slip

New "PULL-GEAR" SPEED-REDUCING PULLEY Increases Drill Press Capacity



Amazing new internally geared speed reducer doubles drill press capacity. Greater power, greater efficiency, greater productivity. Provides the correct speed and power for larger drilling, reaming, tapping and boring on light presses. Easily installed in five minutes. Adaptable to all type machines. Spindle speed range approximately 45 to 2000 RPM. Write for literature.

Made in 3 Motor Shaft Sizes ½" • ⅝" • ¾"

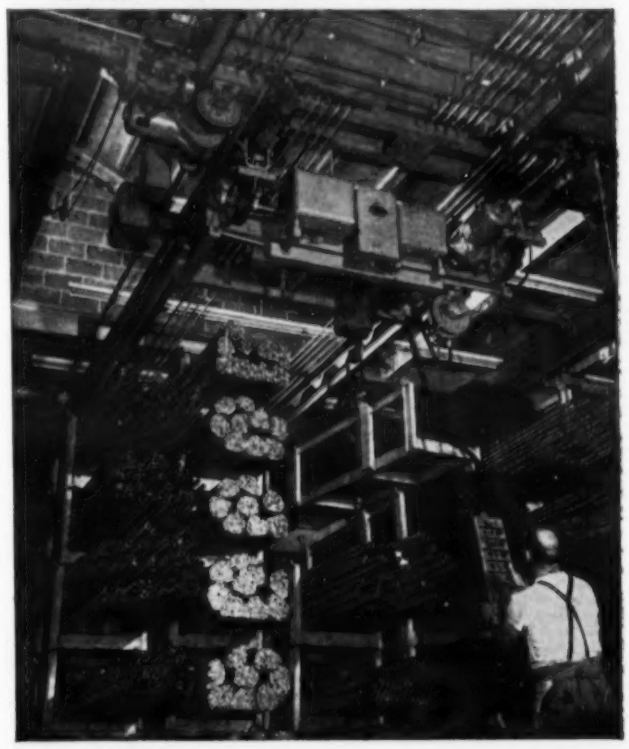
Some Territories Open to Jobbers

THE PULL-GEAR CO.
4118 E. 8-Mile Rd., Detroit 34, Mich.

WRITE FOR LITERATURE

For more details circle NED-947 E3 on enclosed inquiry slip

NOW UNLOAD CARS AND TRUCKS IN ONE TENTH FORMER TIME



MANPOWER hard to find? Do men and machines stand idle waiting for materials? Is the handling of heavy and slippery shapes hazardous, slow and costly? Then listen to the experience of this recent purchaser of Louden Overhead Handling equipment.

"With the Louden equipment shown in the photograph, we now unload incoming steel on railroad cars and trucks in 1/10th the time formerly required. For example, 120,000 pounds of steel bars tied in 3-ton bundles were unloaded, sparked, graded and moved into our warehouse in 1¾ hours. With our former handling methods, production was handicapped, inspectors could not work continuously, classifications were confused, and warehouse labor costs were excessive. Now just **one** man using the crane and hoist control shown does this entire handling job easily and safely."

WRITE FOR THIS FREE BOOK
Case histories telling how Louden Monorail Systems have saved time and money for widely different kinds of industries are described and pictured in a new, illustrated, 56-page book called, "Economical Material Handling".

THE LOUDEN MACHINERY COMPANY
7521 S. Superior Ave., Fairfield, Iowa

Louden
OVERHEAD MATERIAL HANDLING

For more details circle NED-948 E3 on enclosed inquiry slip

"LIGHTING COSTS CUT IN HALF,

thanks to the LUSTRA MAN"

(says Vick Chemical Co., Philadelphia, Pa.)

Mr. E. J. Mulvehill, Jr., Vick Chemical's Electrician reports: "Since we adopted Lustra Fluorescent and Incandescent Lamps, maintenance has been cut in half and superior lighting has brought improved plant efficiency."

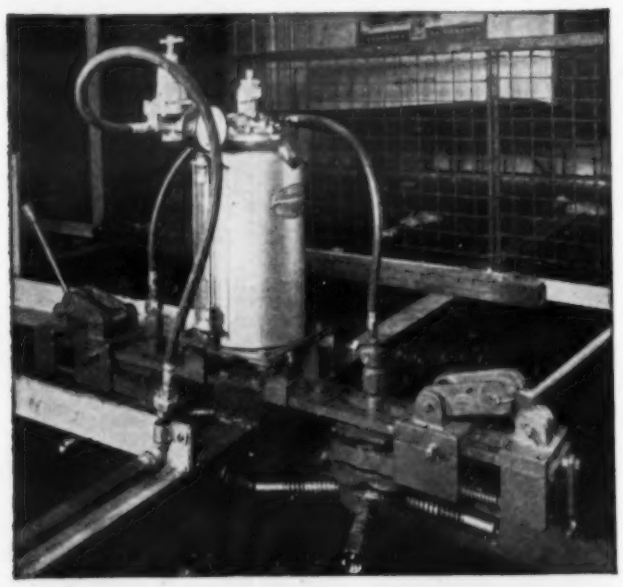
It will pay you to talk over your lighting problems with your local Lustra Man or write us for literature giving the full Lustra story. Lustra Corporation, Dept. R-5, 36 Washington St., Brooklyn 1, N. Y.

Lustra

AMERICA'S DATED LAMPS

DOUBLE DUTY REFLECTOR LAMPS, INCANDESCENT LAMPS, FLUORESCENT TUBES, SPOTLITES AND FLOODLITES, RUGGED DUTY LAMPS, FLUORESCENT FIXTURES AND STARTERS

For more details circle NED-949 E3 on enclosed inquiry slip



Here's How to Lubricate "Skyhooks"

Close-up of an installation in one of our great electric refrigeration plants — lubricant is released only when fitting and gun are in alignment.

"Go hang it on a skyhook" undoubtedly inspired the overhead conveyor, and while they have been a great boon to production and the saving of floor space, they do pose a very specialized problem of lubrication. . . . Not only must there be adequate lubrication for a wide range of temperatures, but it should also be a controlled supply, to avoid the hazard of dripping oil or grease from overhead. Fauver Automatic Conveyor Lubricators meet all of the problems accompanying the lubrication of "Skyhooks" . . . . Send for complete information regarding this dripless, automatic, positive lubrication for your conveyors.

FAUVER Catalogue literature also includes a twenty page section relative to Hydraulic Hose Assemblies and Fittings; data regarding Bullseye Coolant Spouts etc., a request will bring any or all of this information.

FAUVER

J. N. FAUVER CO., INC.

J. N. FAUVER COMPANY, INC.
51 WEST HANCOCK, DETROIT 1
OFFICES...FLINT, GRAND RAPIDS
BRANCH...DAYTON, OHIO

For more details circle NED-950 E3 on enclosed inquiry slip

New Literature & Catalogs

Portable Hardness Testers

Ames Precision Machine Works—20-page pictorial-type catalog covers portable hardness tester line, includes treatise on Rockwell hardness testing, a chart of hardness scales, and descriptions of penetrators, anvils, and available accessories, also complete operating instructions for this instrument.

For more details circle NED-951 E3 on enclosed inquiry slip

Testing Instruments

Gardner Laboratory, Inc.—1953 catalog contains 48 pages of information of paint and petroleum testing instruments and tools for steel drums. It includes photographs and brief specifications on a comprehensive products line, is fully indexed and compiled for easy reference.

For more details circle NED-952 E3 on enclosed inquiry slip

Photo-Identification

Fairchild Camera & Instrument Corp., Special & Industrial Camera Div.—Equipment and process for photo-identifications of plant employees is described and illustrated in 36-page booklet "Industrial Security." Processes can be set up and operated in a personnel office to produce permanent identification in 6 minutes without a darkroom.

For more details circle NED-953 E3 on enclosed inquiry slip

Plastic Bags & Liners

Plastic Packaging Co. — Polyethylene bags and liners for a wide variety of products and applications are covered in 4-page illustrated brochure 923. Bags range from 3 to 38 in. wide and any length, while liners are for use with multiwall bags, cartons, cases or drums. Packaging with various types of support is also detailed.

For more details circle NED-954 E3 on enclosed inquiry slip

Molded & Extruded Rubber Parts

Tyer Rubber Co.—"Molded and Extruded Parts of Natural and Synthetic Rubber" is title of 8-page illustrated catalog which describes these parts. Sections are devoted to rubber products for wide variety of applications. Relative properties of two rubber types are shown.

For more details circle NED-955 E3 on enclosed inquiry slip

Cooling Fans

Westinghouse Electric Corp., Electric Appliance Div.—"A fan for every cooling problem" is theme of catalog 3FN-0301 which includes fans of 10 and 20 in. capable of moving 420 and 10,000 cfm, respectively. Types include table, wall, pedestal, hassock, ventilating and exhaust.

For more details circle NED-956 E3 on enclosed inquiry slip

Automatic Nailer Assembled Skids

Auto-Nailer Co.—"Strength of Auto-Nailer Assembled Skids" is title of 16-page report by E. G. Stern, Virginia Polytechnic Institute research professor of wood construction and research lab. Report describes comparative torsional and edge-wise compressive resistance tests performed on wood skids assembled by Auto-Nailer and Auto nails and those assembled by hand hammer and plain-shank nails.

For more details circle NED-957 E3 on enclosed inquiry slip

Self-Locking Fasteners

Elastic Stop Nut Corp. of America—Details of how many design problems were solved with self-locking fasteners are contained in 32-page booklet. How weight savings, assembly time reductions, simplified design, maximum joint security and similar benefits were obtained is told in case history form.

For more details circle NED-958 E3 on enclosed inquiry slip

Hard Rubber Pipe & Fittings

American Hard Rubber Co.—Rigidity and heat and chemical resistance are attributes of Tempron synthetic hard rubber compound that is described in 4-page bulletin 96-A. It is offered in sheet, rod and tubing and moldings. Bulletin gives data on pipe and fitting sizes, chemicals that can be handled and physical and electrical properties.

For more details circle NED-959 E3 on enclosed inquiry slip

Air Vibration Equipment

Cleveland Vibrator Co.—Practical ways in which various types of Cleveland air vibrators are being used on trucks, bins, hoppers, railroad cars, structural forms, etc., are detailed in 6-page illustrated catalog 106.

For more details circle NED-960 E3 on enclosed inquiry slip

A WIDE RANGE INDICATING CONTROL

TYPE E8N

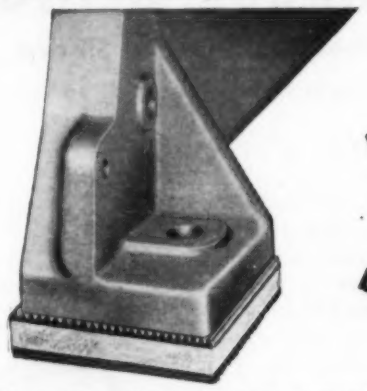
The type E8N indicating control is ideal for installations where an exact temperature reading must be readily available at all times. It is a broad range, precision-built unit that shows the exact temperature of the thermal bulb at all times. The E8N is compensated accurately for wide ambient temperature changes, is simple in design and contains no delicate mechanisms. Various models are available covering ranges of 300° F to 600° F between limits of -150° F to 600° F. On-off differentials available as low as .25° F. Complete details and electrical specifications are contained in bulletin #4-1, write for it today.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

For more details circle NED-961 E3 on enclosed inquiry slip

It's SIMPLE To Control VIBRATION and NOISE with Elasto-Rib...



NO BOLTING

NO CEMENTING

LOW COST

Elasto-Rib effectively stops transmission of vibration and noise by utilizing the elastic and damping properties of both cork and rubber.

It is fast and easy to install. For most machine applications, no bolts, lag screws or cement are required. Sheets 24" x 36" can be sawed or cut to size as needed.

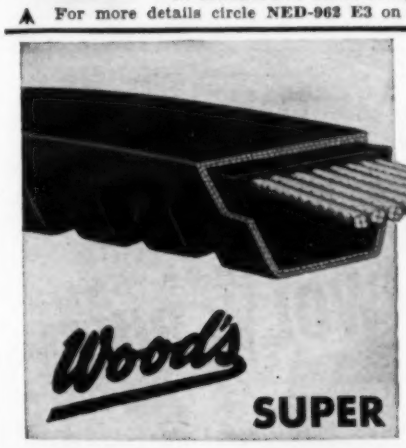
New, illustrated booklet tells all about Elasto-Rib and how to install it. Ask for ER-701 and free sample.

THE KORFUND COMPANY, INC.

KORFUND VIBRATION CONTROL — SPRINGS — RUBBER — CORK

48-35P Thirty Second Place, Long Island City 1, N. Y.
In Canada: 510 Canal Bank, Ville St. Pierre, Montreal

For more details circle NED-962 E3 on enclosed inquiry slip



40% higher HP rating

Wood's SUPER V-BELTS

- Rated 40% above standard—fewer belts, less maintenance
- Continuous strength member has high strength with low stretch
- Notches dissipate heat, increase flexibility and flex life
- Very efficient on small pulleys, short-center, high-speed drives
- Straight sidewalls—impregnated elastic cover
- Available in A, B, C, D & E cross sections
- All belts oil resisting and available static conducting

For further information write for literature or consult your Industrial Distributor.

T. B. Wood's SONS CO.
CHAMBERSBURG, PA.

Mechanical Power Transmission Manufacturers—Since 1857.

CAMBRIDGE, MASS. • NEWARK, N. J. • DALLAS, TEXAS • CLEVELAND, O.

For more details circle NED-963 E3 on enclosed inquiry slip

ONE MANUFACTURER ORDERED 500 OF THESE NEW, STURDY, PRACTICAL

UNIVERSAL STOCK TOTERS!

The handiest truck you can have in your plant. Meets many needs. For line stocking, machine stocking, moving work parts in warehouse, stockroom or shipping room.

Container is 30" long, 24" wide, 10" deep. Overall height from floor to top of unit 34½" with 4" casters (35" with 5" casters). Casters at one end are swivel-type. Choice of semisteel or fiber casters. Sturdy angle iron frame with 12-gauge sheet metal on sides and bottom of container. (Note: Container available with sturdy expanded metal sides and bottom if desired.)

The Universal Stock Toter is highly maneuverable, speeds up the job, reduces worker fatigue. It eliminates the manual handling of heavy tote boxes or makeshift containers. Places the work at normal operating elevation. Ideal for assisting in "good housekeeping." Practical, economical for numerous jobs. Moderately priced.

Literature, prices and name of our nearest representative supplied on request.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

For more details circle NED-964 E3 on enclosed inquiry slip

GET **DRY** PHOTO COPIES AUTOMATICALLY
IN YOUR OWN OFFICE OR PLANT

OF INVOICES, BLUEPRINTS, CHARTS, BIDS, DRAWINGS, TRACINGS . . . anything typed, written, printed or drawn.

at only **8c** each

with **EXACT-PHOTE-COPY!**

EXPOSES AND PROCESSES AUTOMATICALLY!

This new compact fully automatic dry processing unit is the answer to all your copying needs. Saves time. Saves money. Eliminates costly errors. Speeds-up office and plant procedure. Simple to operate. NO developing, NO washing, NO fixing, NO drying, NO darkroom, NO chemical fumes! Requires a minimum of working space, and any office boy or girl can produce 60 to 90 error-free, legally-accepted copies per hour. Weighs 47 lbs. Operates on 110V AC. Attractively finished in grey vinyl. Features automatic timer and convenient carrying handle. Prices start at $105.00 for hand operated model. All models are made in U. S. A.

FULLY GUARANTEED

WRITE FOR THE AMAZING FACTS TODAY!

GENERAL PHOTO PRODUCTS CO., INC.
Manufacturers of Dry and Wet Process Equipment
GENERAL PHOTO BLDG., CHATHAM, NEW JERSEY

For more details circle NED-965 E3 on enclosed inquiry slip

Star has 'em
WHEN YOU WANT 'EM!

STAINLESS STEEL FASTENINGS OF ALL TYPES
RIGHT OFF THE SHELF

In-Stock-Service on *small or large quantities* • Cap Screws • Machine Screws • Sheet Metal and Wood Screws • Set Screws • Nuts, Washers, Etc. Class 3 AN Drilled Fillister Heads.

Fast service on special screw machine products.

WRITE, WIRE OR PHONE TODAY
New Catalog Available

Star STAINLESS SCREW CO.
214 Union Avenue • ARmory 4-1240 • Paterson 2, N. J.
Direct NEW YORK Telephone: WIsconsin 7-9041

For more details circle NED-966 E3 on enclosed inquiry slip

New Processes & Materials

DEGREASING MATERIAL is ground cellulose fiber

Cottentex, a finely ground cellulose fiber material with high absorbency, is available for use in degreasing and drying operations using tumbling mills. It is capable of absorbing over eight times its own weight in oils, grease or any liquid. Light in weight and soft, it protects materials such as bearings during tumbling. Made by **Cottentex Mfg. Co.**, 403F E. Wells St., Milwaukee, Wis.

For more details circle NED-967 E3 on enclosed inquiry slip

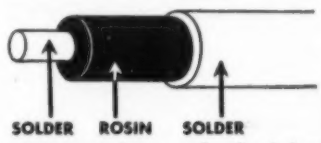
ALUMINUM ALLOY base is 99.99 per cent pure aluminum

Now available in commercial quantities in standard shapes, sheet, coils, strip, bars, tubes, wire and extrusions and in soft, half-hard and hard tempers is Lurium, a West Germany-produced aluminum alloy. Highly finished parts made from alloy will not tarnish or lose their luster even when submerged in salt water. Basis of alloy's high finish is method of producing 99.99 per cent pure aluminum. It is a work hardened alloy, easy to fabricate and can be anodized and dyed in any color to simulate gold, silver, platinum, copper, brass or any other alloy. Applications abroad include ornamental trim for autos, radios and appliances, costume jewelry, lighting fixtures and reflectors. Distributed by **Fromson Orban Co.**, 204 E. 43rd St., New York 17, N. Y.

For more details circle NED-968 E3 on enclosed inquiry slip

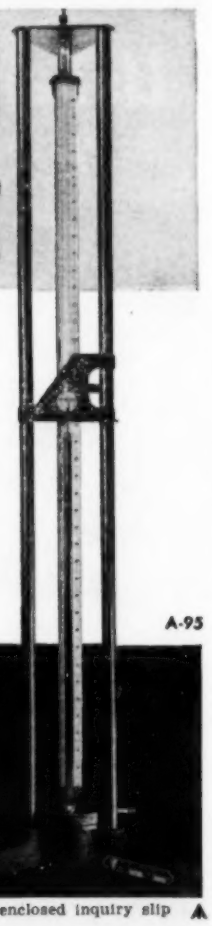
ROSIN FILLED SOLDER minimizes rosin voids, cold joints

Solder wire coated with rosin over which is formed an outer solder sleeve forms unusual construction of Cen-Tri-Core solder. Rosin voids and cold jointing are minimized and flux continuity is assured. Simultaneous wetting-flow and take are characteristics. Energized flux is noncorrosive and electrically nonconductive. Solder conforms to Federal Specification QQS-571b, Par. E-2a. It has been tested in cycled humidity 250-v dc at high temperatures for 1008 hours with no evidence of corrosion or breakdown of rosin. Made by **Alpha Metals, Inc.**, 57 Water St., Jersey City 4, N. J.



For more details circle NED-969 E3 on enclosed inquiry slip

PRECISION MERCURIAL MANOMETER



Accuracy . . . .01 inches Hg.

Float Indicator . . . no meniscus errors

Temperature Compensation . . . no corrections

Write today for Publication No. TP-29-A

A-95

WALLACE & TIERNAN PRODUCTS, INC.
ELECTRICAL MECHANISMS AND PRECISION INSTRUMENTS
Belleville 9, New Jersey
Represented in Principal Cities
In Canada, Wallace & Tiernan Products, Ltd.—Toronto

For more details circle NED-970 E3 on enclosed inquiry slip

CONTROL PAINT OVERSPRAY
. . . In a big way!

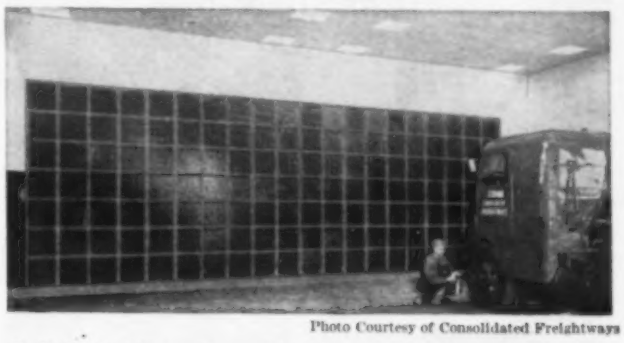


Photo Courtesy of Consolidated Freightways

R P Paint Arrestors Provide Effective Control of Large Volume Overspray . . . at Low Cost!

This user eliminated paint overspray problems in the most effective, most economical way possible . . . with R P Paint Arrestors! This new, better method is inexpensive to install and maintain, saving in floor space, flexible in application. Check today, on the R P way to modern overspray removal.

WRITE FOR FREE BOOKLET
Helpful, informative suggestions to solve your paint spray booth problems. Write today.

RESEARCH PRODUCTS CORPORATION
Dept. 32 Madison 10, Wis.

RP . . . PRODUCTS OF RESEARCH

For more details circle NED-971 E3 on enclosed inquiry slip

WHICH POWER TYPE IS BEST FOR YOU?

. . . electric, gas, diesel or L.P. gas?

WHEN THE ANSWER IS *Electric* CLARK ELECTRICS ARE THE ANSWER *...Here's why*

1 Better battery efficiency—users report *more work* per amp-hour with CLARK.

2 Greater stability—safer for load, safer for operator.

3 Faster acceleration, greater speed—gets more work done, covers more ground.

4 Safer, smoother stops—with CLARK's positive-controlled, reverse torque braking.

5 "Application-engineered"—for special requirements, CLARK provides custom engineering.

No two jobs are exactly alike, so there's no such thing as one "best" power type. Which type is best *for you?*—that's the important question. The only person who can give a really *unbiased* answer is one who knows them all, and knows where they fit.

That's your local CLARK Dealer. He carries electric, gas, diesel and L. P. gas units—and he's got no ax to grind for any one. His object is to provide the one that's best for you. For example, careful application analysis often proves that *electric* trucks are best for certain jobs because of these advantages:

★ Economical operation on low-cost electric power

★ Long life, less maintenance—electrics have fewer, simpler moving parts

★ Smooth, vibration-free handling of fragile loads, less wear on truck

★ Quiet, clean operation

Which power type is right for you? No matter what it is, you'll find it in the CLARK line of quality handling equipment. You'll always be right when you buy from CLARK.

1903 1953 FIFTY YEARS CLARK EQUIPMENT

CLARK ELECTRIC, GAS, DIESEL, L.P. GAS **FORK TRUCKS**
AND POWERED HAND TRUCKS • INDUSTRIAL TOWING TRACTORS

INDUSTRIAL TRUCK DIVISION • CLARK EQUIPMENT COMPANY • BATTLE CREEK 21, MICHIGAN

Please send: ☐ Condensed Catalog ☐ Driver Training Movie ☐ Have Representative Call

Name_____
Firm Name_____
Street_____
City_____ Zone____ State____

AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS

For more details circle NED-972 E3 on enclosed inquiry slip

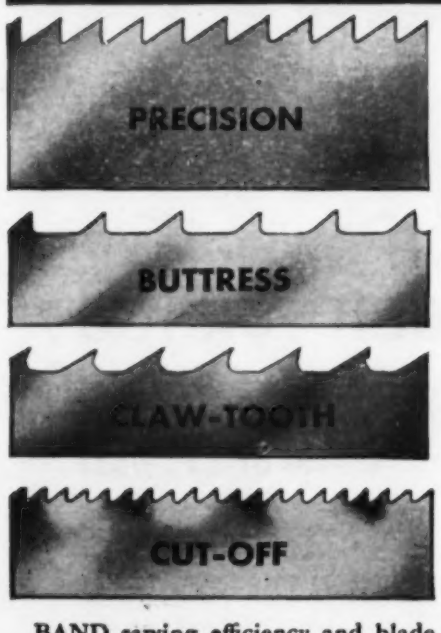
Lindberg Air or Hydraulic Cylinders provide dependable, low cost power for lifting, forcing, pulling, pressing, pushing and clamping. Ask for bulletin No. 701, "Lindberg Hydraulic Cylinders" . . or No. 731, "Lindberg Air Cylinders."

LINDBERG CYLINDERS AIR HYDRAULIC

Lindberg Engineering Company, 2482 West Hubbard St., Chicago 12, Ill.

▲ For more details circle NED-973 E3 on enclosed inquiry slip ▲

HOW TO GET GREATER BAND SAWING EFFICIENCY



Use the right SAW BAND for the job!

BAND sawing efficiency and blade life, whether with a vertical contour sawing machine or a horizontal cut-off saw, is tremendously dependent on the type of saw band, pitch, width and set pattern. Here are examples:

- **Cut-off time reduced from 1⅓ hours to 1⅓ minutes!** Using a standard ¾" wide 6-pitch blade on a Kalamazoo saw, 1⅓ hours was required to cut one 4½" aluminum bar; with a ¾", 3-pitch DoALL Claw Tooth blade, only 1⅓ minutes! This job required a change of pitch and type of blade.
- **Blade life increased 20 times!**—miscellaneous cut-off work formerly consumed 3 or 4 blades daily. A change to the new DoALL positive rake "Claw-Tooth" Band resulted in blade life of over a week.
- **Faster Sawing**—change from a ¾" width 12-pitch raker set blade to DoALL ⅝" wide 8-pitch wave set blade on a Wells saw reduced cut-off time 25 minutes per piece on 8¼" steel. Width, pitch and set pattern all affected performance.

A factory-trained DoALL Sawing Specialist can help you on any bandsawing job. Call your local DoALL Sales-Service Store, or write:

THE DoALL COMPANY
254 N. Laurel Ave., Des Plaines, Ill.

HOW TO SELECT THE RIGHT SAW BAND—160 pages of saw band data. Terminology, types of saw bands, selection tables, recommended speeds and feeds, sawing hints and helps. Only $2.00. Order "Band Tool Manual" from your DoALL Store or The DoALL Company.

Descriptive bulletins on saw bands FREE on Request.

SB-20

▲ For more details circle NED-974 E3 on enclosed inquiry slip ▲

New Literature & Catalogs

Air-Hydraulic Drill Unit

Rockwell Mfg. Co., Delta Power Tool Div.—Extensive engineering data which presents information on operation, capacity, available drive arrangements and power regulation of air-powered hydraulic drill units are contents of 20-page illustrated catalog AD 723. Units have infinitely adjustable spindle travel of 1½ in. for smallest unit and up to 6 in. for the largest. Charts have information on proper gear ratios, pulley drives and motors needed.

▲ For more details circle NED-975 E3 on enclosed inquiry slip ▲

Story of Diatomite

Johns-Manville — 28-page brochure "Celite—The Story of Diatomite" uses photos, drawings as well as text to trace the development of this white inorganic powder. Product is used as filter for water purification, dry cleaning and production of foods and beverages; as mineral filler in manufacture of paints, plastics and paper; as high temperature insulation; and as catalyst carrier wherever silica is indicated.

▲ For more details circle NED-976 E3 on enclosed inquiry slip ▲

Control Valve Listing

Republic Mfg. Co.—Needle, globe, plug, check relief and special valves are listed in 44-page catalog No. 352A, a new edition to which has been added gage protectors and snubbers, bleeders and AN vacuum control valves. Units listed are made of brass, bronze, steel, stainless and aluminum alloy and are suitable for instrumentation, aircraft, processing, hydraulic system and industrial application.

▲ For more details circle NED-977 E3 on enclosed inquiry slip ▲

Fractional Horsepower V-Belts

Raybestos-Manhattan, Inc., Manhattan Rubber Div. —Latest fractional horsepower V-belt catalog lists belts according to new industry-standard numbering system. Various type machines are listed alphabetically by company or trade name for convenience in determining proper belt.

▲ For more details circle NED-978 E3 on enclosed inquiry slip ▲

Climateproof Packaging

Cargo Packers Inc.—"Shock-Proof Climate-Proof Packaging" is title of 12-page illustrated brochure which shows and describes company facilities for packaging to particular specifications. Plant is keyed to production line packaging and serves all branches of the armed forces.

▲ For more details circle NED-979 E3 on enclosed inquiry slip ▲

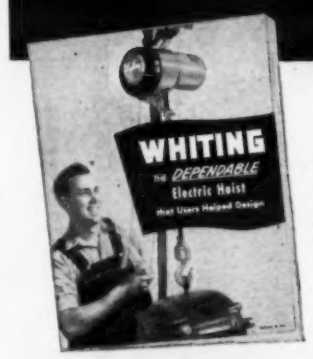
Pneumatic Conveying Systems

Holly Pneumatic Systems, Inc.—To show the wide adaptability of pneumatic conveying to bulk handling and transporting of pulverized, granular and small broken materials is purpose of 8-page illustrated bulletin. Typical industrial installations are shown and described.

▲ For more details circle NED-980 E3 on enclosed inquiry slip ▲

LIFT at Lowest Cost!

GET THIS BOOKLET FOR FACTS ON THE HOIST THAT WILL SERVE YOU BEST!



Read *why* the Whiting Electric Chain Hoist is the *lowest* in operating cost . . . *why* it is the *safest* hoist and the *easiest* to operate. And read about the *exclusive* Whiting Warranty Plan, too. All this information, plus data on models and capacities is contained in Bulletin H-112. Write for a free copy now!

WHITING CORPORATION 15660 Lathrop Ave. • Harvey, Illinois

WHITING ELECTRIC CHAIN HOIST

▲ For more details circle NED-981 E3 on enclosed inquiry slip ▲

The Wingfoil Straight-Line Duct Fan is Unexcelled

For supplying Fresh Air or Exhausting Air containing Paint Spray, Dirt, Steam, Explosive Vapors, etc., in Any Volume or Pressure

It may be used as a roof intake or exhaust, or it may be inserted in a run of duct, occupying no extra space. The motor is located outside the casing, driving the Wingfoil "non-overloading" fan by means of an enclosed V-belt. It is light, compact and easily handled, and may be mounted either horizontally or vertically.

Write for Bulletin F-10

L. J. Wing Mfg. Co. 165 Vreeland Mills Road Linden, New Jersey

▲ For more details circle NED-982 E3 on enclosed inquiry slip ▲

Rubber Expansion Joints . . .

Rubber Expansion Joints shown are just a few of the many furnished to a public utility, but adaptable to any pipeline installation for transporting liquids or gases where the temperature does not exceed the range of -10°F. to 200°F. For other temperature conditions, consult our engineers.

With a backlog of more than half a century of experience, La Favorite "know-how" is daily solving many complex problems which involve protection from corrosion and abrasion. Consult La Favorite Engineers, without obligation on your part.

Send blue prints for estimate on costs.

2349

LA FAVORITE RUBBER MFG. CO.
273 Wagaraw Road • Hawthorne, N. J.
RUBBER LININGS • RUBBER COVERING • RUBBER ENGINEERING

▲ For more details circle NED-983 E3 on enclosed inquiry slip ▲

NEW to cut your costs and increase production

AUTOMATIC Hobbs POWER SHEAR

Feeds, controls, measures, and cuts soft "in-process" materials to uniform sheet sizes!

Designed for easy handling of paper, plastic, cloth, etc. up to 60" wide from extruders, laminators, "in-process" operations, or from rolls and sheets. Uses electronic measuring device and precise controls for accurate, low cost operation. Processes material at rate of 10 to 100 feet a minute, depending on length of cut. Web can be cut into smaller widths by adding slitting attachment, so material can be accurately slit and cut in one operation. Special feeding and take-away devices are available for any production set-up.

For trouble-free performance through the years, specify only genuine Hobbs replacement blades, accessories and repair parts.

For your profits' sake — be sure to investigate this latest Power Shear Development. Write for details.

HOBBS MANUFACTURING CO.
41 SALISBURY ST., WORCESTER 5, MASS.
EST. 1883 *Producers of Modern Machinery for Modern Industry*
Jacques Hand and Power Shears, Slitters and Rewinders, Hobbs Autotronic and Tri-Power Die Presses, Paper Box Machinery and Touch-O-Matic Industrial Controls

▲ For more details circle NED-984 E3 on enclosed inquiry slip ▲

FREE! The most popular Beckman pH Booklet ever published!

"WHAT EVERY EXECUTIVE SHOULD KNOW ABOUT pH"

. . . a short, informative outline of pH—*what* it is, *how* it's used, *where* it is making vital savings in modern industrial applications of all types.

▸ A top executive in one of the nation's leading corporations writes: *"An excellent job of reducing a complex subject to easily-understood fundamentals. May we reprint it for use in training our men?"*

▸ Another writes . . . *"This is the simplest, most easily-understood explanation of pH I have ever seen. May we have extra copies for plant educational work?"*

***Wherever there's water, there's pH.* Perhaps this booklet can help you cut production costs, improve uniformity, reduce waste through Beckman pH Control. A copy will gladly be sent free on request. Ask for Bulletin 1-61**

BECKMAN INSTRUMENTS, INC.
SOUTH PASADENA 1, CALIFORNIA

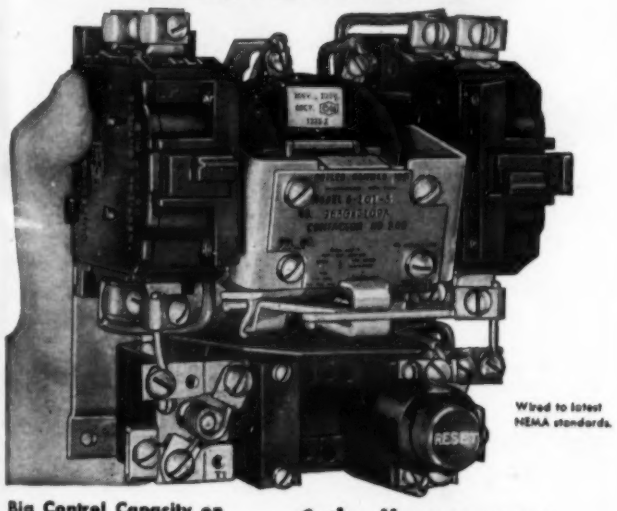
BECKMAN INSTRUMENTS control modern industries

Factory Service Branches: New York—Chicago—Los Angeles

Beckman Instruments include: pH Meters and Electrodes — Spectrophotometers — Radioactivity Meters — Special Instruments

▲ For more details circle **NED-985 E3** on enclosed inquiry slip ▲

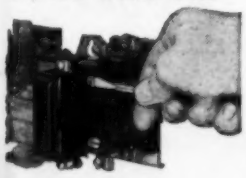
NEWS FOR MOTOR CONTROL DESIGNERS



Wired to latest NEMA standards.

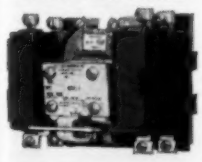
Big Control Capacity on Small Panel Area. NEMA Size 1 Compact Starter; 7½ HP. 440 V. Measures only 5.75" x 5.75" x 3.8"

Cutler-Hammer ☆ ☆ ☆ Components Offer Many Desirable New Features



Easiest-to-add Extra Interlocks. Only a screwdriver is needed; contactor or other parts not disturbed.

Three-Coil Overload Protection. Full 3-Phase protection without exaggerated space requirements and expense. 3-Coil relay shown here with 3-position switch and reset button.



Most Adaptable Control Relays. Two to six poles; dust-safe vertical contacts. Contacts can be changed from N.O. to N.C. or vice versa by simply inverting position. Circuit arrangement is always visible.

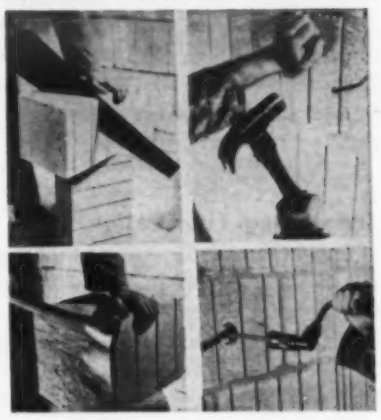
Electrical engineers everywhere today are quick to praise the spectacular new Cutler-Hammer ☆ ☆ ☆ Motor Control. The three stars stand for three entirely new standards in motor control performance and satisfaction . . . an entirely new standard in ease of installation . . . an entirely new standard in trouble-free performance . . . an entirely new standard in both electrical and mechanical life. These new standards are of great importance to machine design and control circuit engineers. Particularly, because they have been achieved with components of extremely small size designed to permit the closest possible grouping on panels. Panel spacing can be determined almost entirely by electrical considerations . . . extra dead space is not needed for the mechanics of wiring, adjusting, or even disassembling installed components. No other components offer such simple and complete flexibility; easy-to-add electrical interlocks, easy-to-change contact arrangements on control relays, three coil overload relays for full three-phase protection, etc. Write *today* for technical data sheets. CUTLER-HAMMER, Inc., 1377 W. St. Paul Avenue, Milwaukee 1, Wisconsin.

CUTLER-HAMMER
MOTOR CONTROL
C-H

▲ For more details circle **NED-986 E3** on enclosed inquiry slip ▲

New Processes & Materials

BUILDING MATERIAL is lightweight and workable



Zeprex, a lightweight mineral building material for use in building superstructures, can be sawed, drilled, cut with an axe and nailed like wood. Combining the outstanding properties of wood and stone substances, its weight is one-fifth that of concrete. It is made in slab form in 20-in. widths in lengths up to 18 ft. Thickness, which depends upon desired strength and insulation value, can vary from 2 to 10 in. Developed in Sweden, material is 10 times better insulator than concrete, is incombustible and can be painted or left with its natural oyster-white surface. Made by **United States Plywood Corp.**, 55 W. 44th St., New York 36, N. Y.

▲ For more details circle **NED-987 E3** on enclosed inquiry slip ▲

FREE-MACHINING STEEL for screws and small machined parts

Screws, nuts, studs, bolts and other small machined products can be made of J & L 1200 series free-machining steel, furnished in cold-finished bar form. Analysis is comparable to AISI 1200 series steels and it meets specifications of SAE 110 series listings. Three separate steel analyses comprise the series and are identified as 1211, 1212 and 1213. A little more than the usual amount of manganese in this cold-drawn bar stock provides strength without toughening the steel. Bars are supplied with accurate shape and size and a smooth finish. Made by **Jones & Laughlin Steel Corp.**, 456 Liberty Ave., Pittsburgh 30, Pa.

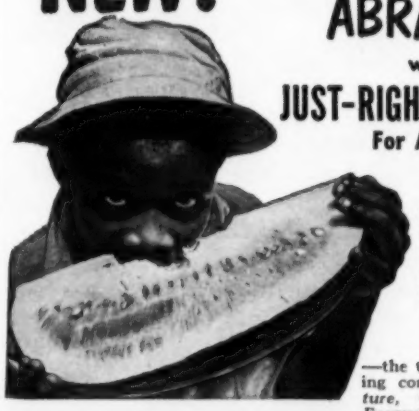
▲ For more details circle **NED-988 E3** on enclosed inquiry slip ▲

Power Saw Cutting

Skil Corp.—24-page manual on cutting applications with a portable power saw is entitled "Skil Saw Problem Solver" and lists 30 different materials with the most effective method of cutting them. Other data on proper blade selection and cutting techniques is included.

▲ For more details circle **NED-989 E3** on enclosed inquiry slip ▲

NEW! Brightboy BL SERIES ABRASIVES with that JUST-RIGHT SMOOTH BITE For All Metals . . .



One-operation Burring, Finishing, Cleaning, Polishing

New, Brightboy BL Abrasives fill the increasing demand for rubber-cushioned abrasives for finishing stainless steel, forged aluminum and other metals. *Reason:*

THAT JUST-RIGHT SMOOTH BITE

—the time-saving, quality finishing combination of *Special-Texture, Cushioning Rubber* and *Formula-Matched Abrasive*

BRIGHTBOY NOW AVAILABLE IN 6 TEXTURES

54 BL—For faster finishing action on all metals • TUFF-TEX—For finishing action on sharp burrs and edges • 70 BL—Wide range of finishing action on all metals • STANDARD—General finishing action on all metals • 120 BL—Wide finishing range on medium-hard and soft metals; high polish on hard metals • FINE-TEX—Polishing, finishing and burring soft metals; cleaning medium-hard and hard metals.

Many applications hitherto beyond the limits of other finishing methods. *Ask your dealer for brochure.* Write us on problems where finishing is involved.

Brightboy Industrial Div. Weldon Roberts Rubber Co.
95 No. 13th St. Newark 7, N. J.
America's Pioneer Manufacturers of Rubber Bonded Abrasives

WELDON ROBERTS
Brightboy
RUBBER CUSHIONED ABRASIVES

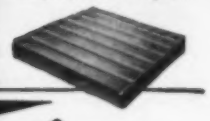
▲ For more details circle **NED-990 E3** on enclosed inquiry slip ▲

Type PB-120T box and platform with tiering lugs.

Type PB-630 box and platform unit with sliding end door.

Type PB-120L box and platform unit with full-length lifting lugs.

Double-Face Steel Pallets — rigidity and strength with minimum weight; no sharp edges; three styles.



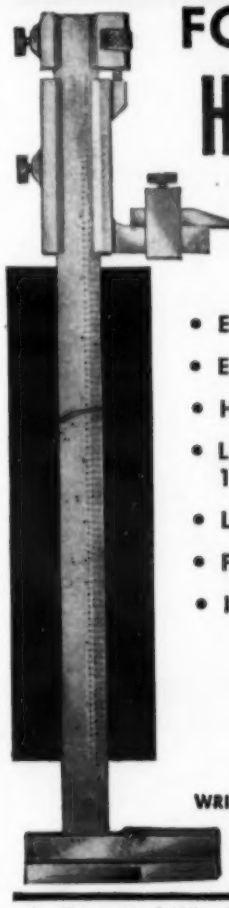
Specify this NEW name for the ones proven best in STEEL BOXES and SKIDS

Republic

Throughout industry, these quality boxes and skids have been known and preferred for their outstanding ability to carry the load and keep things moving. Now, they come to you as "Republic" brand products—exactly the same in everything but name. Remember this name "Republic" when you want the best in steel boxes and skids for every purpose. Write for free illustrated catalog of the complete "Republic" line.

PRESSED STEEL DIVISION
REPUBLIC STEEL CORPORATION
6206 TRUSCON AVE. • CLEVELAND 27, OHIO

▲ For more details circle **NED-991 E3** on enclosed inquiry slip ▲



FOSTER PRECISION HEIGHT GAGES

10" to 48"

Delivery from Stock

- EXTREMELY ACCURATE
- EXTRA HEAVY BASE AND BEAM
- HARDENED CHROME
- LARGE ADJUSTABLE VERNIER 1.225 LONG
- LONG SLIDES
- FAULTLESS WORKMANSHIP
- IN BEAUTIFUL WOODEN CASE

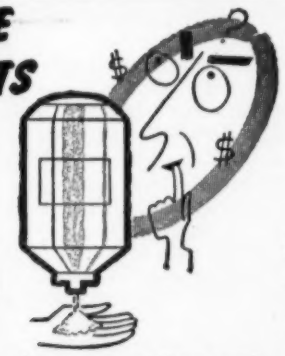
also FOSTER 6" to 96" *Precision Vernier* CALIPERS

WRITE

FOSTER SUPPLIES CO.
5252 N. BROADWAY CHICAGO 40, ILL.

▲ For more details circle **NED-992 E3** on enclosed inquiry slip ▲

DO YOU FIGURE YOUR SOAP COSTS



You might think you're saving money when you pour a "cheap soap" in the top of your dispensers. Actually it's the number of washes that come out the bottom—the cost per wash—that really counts. Does your present soap lather quickly or do your workers have to use a hand full and rub and rub and rub to get results? (A slow acting soap causes congestion in wash rooms—you pay for the "lost time".) Does your present soap get hands clean with one shot or does it take half a dozen? Does it really do the job at all? Is it tough on hands? Does it cause chapping, drying or other skin irritations? Are your soap dispensers in proper working order or are they wasting soap because they're out of kilter?

Get the answer to these and other questions about your soap costs the easy way. Mail the attached coupon for a FREE "SBS-Soap-Saver-Survey" today at absolutely **NO Obligation** on your part.

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Chemical By-Products Division • Established 1909
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New Literature & Catalogs

Wet & Dry Tumbling

Tumb-L-Matic, Inc.—Five Tumb-L-Matic processes for finishing metal and plastic parts by tumbling with abrasive materials in rotating barrels are described in bulletin PC-52. Wet and dry processes are covered. Included is table listing barrel types, abrasive compounds and carrier media used for cutting, smoothing and lustering.

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Simplifying Lubrication

Pure Oil Co.—If your plant seems to have too few oilers and/or too many lubricants, you should read the booklet "How To Simplify and Save with Pure Industrial Lubricants." It sets up six simple steps to streamline your lubrication program, pointing out that the average plant needs but six lubricants.

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Wire Screen & Filter Cloth

Multi-Metal Wire Cloth Co.—"You Dream It Up—Multi-Metal Will Build It" is title and theme of 8-page illustrated catalog on the various applications of wire screen and filter cloth for filtering, straining, washing and screening. Several application examples are detailed.

▲ For more details circle **NED-998 E3** on enclosed inquiry slip ▲

Roller Chains & Sprockets

Chain Belt Co., Baldwin-Duckworth Div.—Inherent advantages of roller chain are described and popular sizes of Baldwin-Rex roller chains are illustrated in 54-page bulletin No. 52-1. A section is devoted to selection of standard roller chain drives and has formulas, tables and examples. Another deals with stock sprockets, their characteristics and prices.

▲ For more details circle **NED-999 E3** on enclosed inquiry slip ▲

Piping & Pressure Vessel Bolting

Taylor Forge & Pipe Works—"Modern Steel Bolting for Piping and Pressure Vessels" is subject and title of 24-page illustrated bulletin 524. Presented as an ASME paper, it deals with proper selection of bolting materials and contains a compilation of bolt properties, plus a discussion on behavior of bolted flanged connections.

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Porous Ceramic Media

Filtros Inc.—White in color, strong and acid resistant, Filtros porous ceramic material is described and its applications illustrated in 12-page catalog No. 10. Applications include filtration, diffusion, aeration, catalyst supports, water filtration underdrains and air conveyor systems.

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Pump Selection & Application

Geo. D. Roper Corp.—"How To Solve Pumping Problems" is title of 36-page handbook. An introduction which explains and illustrates the operation of rotary gear pumps is followed by three sample problems showing the computation procedures necessary to apply these pumps to a particular job. The balance of the book is made up of helpful charts and of data relating to pump application.

▲ For more details circle **NED-1002 E3** on enclosed inquiry slip ▲

Dynamometers & Testers

W. C. Dillon & Co.—A dynamometer and two tensile strength testing instruments are described in illustrated bulletin D4, 2 and LR2. The dynamometer is portable and exceedingly compact, one of the testers is a low range model and the other a universal. Full specifications and ordering information are given in each case.

▲ For more details circle **NED-1003 E3** on enclosed inquiry slip ▲

Barrel Handling Equipment

Thomas Truck & Caster Co.—Bulletin B53 has up-to-date information on barrel trucks, barrel drain stands, barrel skids, up-enders and other parallel purpose units.

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Clamps & Components

West Point Mfg. Co.—64-page catalog "Clamp Assemblies & Fixture Details" has just been issued. Included are 15 styles of clamps in the form of full scale template sheets. These are available in 100 sizes. Also featured are more than 350 jig and fixture components.

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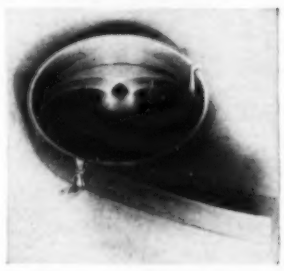

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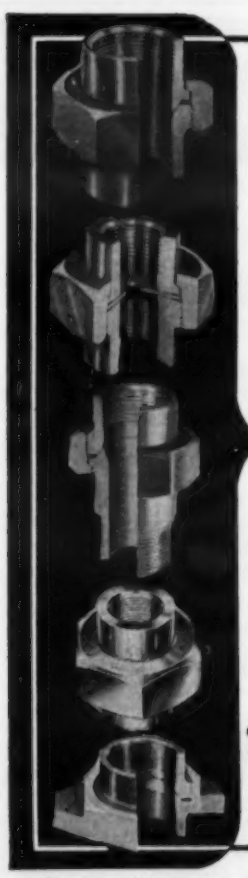

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STONSEAL forms a lining on the microscopic pores of masonry and rain bounces off! It penetrates the surface, leaves no film, nothing to wear away. Just one application of STONSEAL does the trick. "It's superdurable." Won't discolor, acid and alkali-resistant and unaffected by salt spray. STONSEAL protects your walls from leaking—seals out the rain. Ideal for masonry or concrete surfaces. Send for full details today.

STONHARD COMPANY

Building Maintenance Materials Since 1922

101 Stonhard Bldg., 1306 Spring Garden Street, Phila. 23, Pa.

Yes, I want details on STONHARD STONSEAL 101/5/53

Name .....

Company ..... Title .....

Address .....

City ..... Zone ..... State .....

For more details circle NED-1020 E3 on enclosed inquiry slip

HOW TO SAVE MONEY ON STEEL SHELVING

The real cost of shelving is the erected cost

That's why highest quality DeLuxe shelving costs you less. DeLuxe precision shelving has *fewer parts*, uses *80% less bolts* and is the *only shelving* available that is *100% adjustable*. It's quicker, less costly to install—easier to adjust.

Wherever you are, a DeLuxe factory representative is available to give you a complete engineering, planning and layout service without obligation.

Write for a free catalog now, while your mind is on shelving.

DELUXE METAL FURNITURE CO.

305 Struthers St., Warren, Pa.

DeLuxe

For over 25 Years Manufacturers of.

Storage Shelving • Library Shelving • Storage Cabinets • Shop Equipment

For more details circle NED-1021 E3 on enclosed inquiry slip

WATSON-STILLMAN

HYDRAULIC POWER TOOLS FOR INDUSTRY

Send for your copy of Bulletin A-5 . . . It's Free.

WATSON-STILLMAN FITTINGS DIVISION

H. K. PORTER COMPANY, INC.

Roselle, New Jersey

For more details circle NED-1022 E3 on enclosed inquiry slip

Stop That Tramp Iron!

with STEARNS ELECTRO-MAGNETIC PULLEYS

A Stearns Electro-Magnetic Pulley protects your crushing equipment by removing all tramp iron automatically—economically. Reduce shut-down time and keep your repair charges LOW — install a Stearns Electro-Magnetic Pulley. It is the only economical and effective insurance against the tramp iron hazard.

For a thorough investigation of your separation problem, Stearns offers complete laboratory research facilities. Write today for details on testing of sample material.

1009

MAGNETIC EQUIPMENT FOR ALL INDUSTRY

STEARNS MAGNETS

STEARNS MAGNETIC, INC.
653 South 28th St., Milwaukee 46, Wis.

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TINS ALL METALS

Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it is completely stable and will not liquefy in can. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packaged in 1½ lb. cans, price $3.00 f.o.b. *Advt.*

FARRELLOY CO.

1246 North 26th St. Phila. 21, Pa.

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NoDrip ...STOPS CONDENSATION DRIP!

NoDRIP PREVENTS RUST
in addition to stopping drip and keeping floors dry.

ANYONE CAN APPLY
Brush, trowel or spray NoDrip on tanks, condensers, suction lines, vats, pipes, walls, ceilings, etc. NoDrip adheres to metal, concrete, brick, plaster. It forms a seamless covering that is effective as soon as dry. Acid, alkali and brine resistant.

Interesting 32-page Handbook shows what NoDrip is and what it does. It's free. Send coupon today.

☐ SEND NoDRIP HANDBOOK
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COMPANY .....
ADDRESS .....
CITY ..... STATE .....

J. W. MORTELL CO., 526 BURCH ST., KANKAKEE, ILLINOIS

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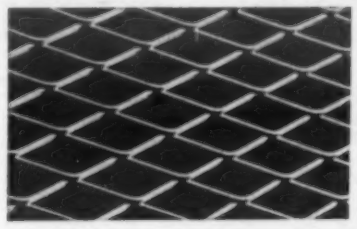
New Processes & Materials

EXPANDED ALUMINUM MESH
offered in variety of meshes



Expamet expanded aluminum, offered in 12 colors, can be obtained in diamond-shaped and other meshes for use in grills, machinery guards, fire screens, lockers, partitions and other applications. It can be dyed and anodized and is offered in un-anodized condition. Colors will not peel, chip or flake and withstand corrosive attack by most acids. Twelve standard mesh sizes range from ⅛ to 8 in. short way of mesh. Different thicknesses of aluminum sheet and varying the strand width during manufacture broadens the range of types available. Standard sheet sizes are 6 ft (long way of mesh) by 3 ft (short way of mesh). Special sizes are obtainable. Available from **British Industries Corp.**, Dept. NED, 164 Duane St., New York 13, N. Y.

▲ For more details circle NED-1026 E3 on enclosed inquiry slip ▲

PAPER TAPE
pressure-sensitive type for cartons

Carton closures that must hold up under extremes of weather and rough handling can be sealed with Scotch No. 260 carton sealing tape of the pressure-sensitive type. It has a 60-lb treated paper backing and grips immediately upon contact. Severe temperature and humidity conditions do not affect its adhesive surface. Tape is made in 120-yd rolls in standard widths from 1 to 3 in., with other widths offered on special order. It meets specifications of many government and shipping agencies. Made by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

▲ For more details circle NED-1027 E3 on enclosed inquiry slip ▲

Automatic Pneumatic Tube System

Lamson Corp.—Bulletin A-101-52 contains a detailed analysis of a fully automatic pneumatic tube system for transporting messages, punch cards, small tools, laboratory samples or other small articles from one point to another. Wiring is localized and accessible at each station, with no central control board being necessary. Components can be added to existing systems if required.

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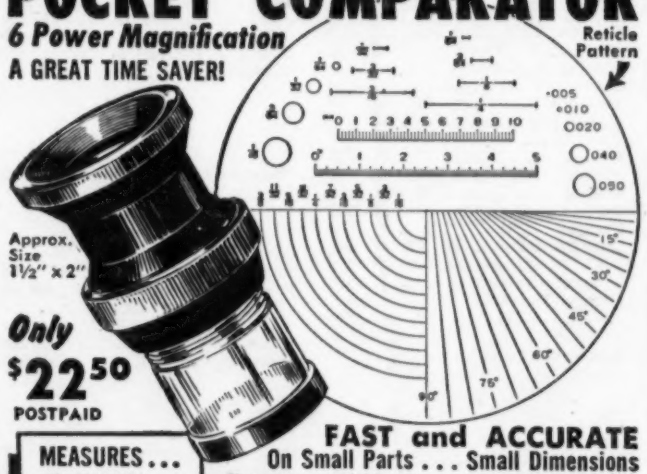
CHECK, MEASURE, INSPECT with this HANDY

POCKET COMPARATOR

6 Power Magnification

A GREAT TIME SAVER!



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FAST and ACCURATE
On Small Parts . . . Small Dimensions

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WE'LL SHIP ON 10-DAY TRIAL OFFER *Attach Coupon to Company Letterhead*

EDMUND SCIENTIFIC CORP., Barrington, New Jersey
Please ship EDSCORP Pocket Comparator Stock No. 30,061-AE on 10-day Trial Offer
☐ Check is enclosed in amount $22.50. ☐ Bill on open account.
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Black & Decker OFFERS WORLD'S MOST COMPLETE LINE OF PORTABLE ELECTRIC DRILL

TOWSON, MD. — The wide selection of drills in the complete Black & Decker line includes the right tool for a portable drilling job. These models range from ¼" to 1¼ capacity . . . offer a choice of speed, power, and hand arrangement for easiest operation. Whether your job calls for a standard or a heavy-duty model, you get powerful B&D-built motor, perfect balance plus all the stamina Black & Decker knows how to build into a tool. For demonstration, see any B&D distributor. For free literature, write: THE BLACK & DECKER MFG. CO. 609 Pennsylvania Ave., Towson 4, Md.

B&D 1¼" Heavy-Duty Drill

B&D ¼" Heavy-Duty HOLGUN® Drill

LEADING DISTRIBUTORS EVERYWHERE SELL

B&D Black & Decker PORTABLE ELECTRIC TOOLS

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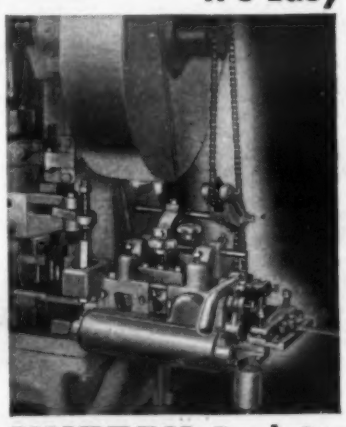
Get RAPID-FIRE PRODUCTION from your PUNCH PRESSES

It's Easy with WITTEK



Automatic Roll Feeds

Wittek automatic roll feeds fit all makes and sizes of punch presses — provide maximum efficiency and extreme accuracy in the high speed automatic feeding of strip stock. Made in single roll, double roll, and compound types with straighteners, in models to feed (push or pull) in any direction. Length of feed is easily adjusted to meet individual requirements.

WITTEK Reel Stands

Simplify Handling of Coiled Stock

Choice of standard models to facilitate handling coiled stock . . . from small, light coils to those weighing up to 800 pounds. Larger reel stands automatically center the coils — provide frictional braking action to prevent overrunning, maintain uniform coil slack.

Write for full particulars

WITTEK Manufacturing Co.
4325 W. 24th Place, Chicago 23, Illinois

Automatic ROLL FEEDS AND REEL STANDS

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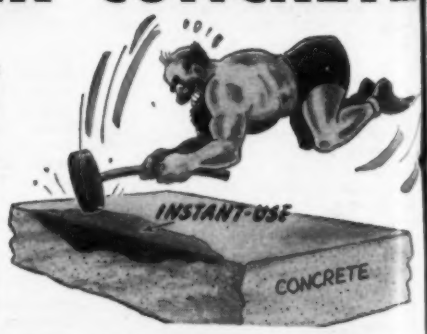
REPAIR CONCRETE WITH INSTANT SETTING PATCH



TEST IT ON TRIAL OFFER

TOUGH AS NAILS! FAST!

Repair broken factory floors without the usual traffic tie-up. Simply shovel INSTANT-USE into hole or rut — tamp smooth — truck over! No waiting! INSTANT-USE bonds tight to old concrete — right up to a feather edge. It's tough. Wears like iron. Won't crack or crumble. Install complete overlay where floors are badly chewed up. Used indoors or out. Immediate shipment.

MAIL COUPON for TRIAL OFFER and FREE HANDBOOK

INSTANT-USE

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Please send me complete INSTANT-USE information, details of TRIAL ORDER PLAN and HAND BOOK OF BUILDING MAINTENANCE—no obligation. (Clip and attach Coupon to Co. letterhead).

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Title .....
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